Aluminum statistical review for 1983

94

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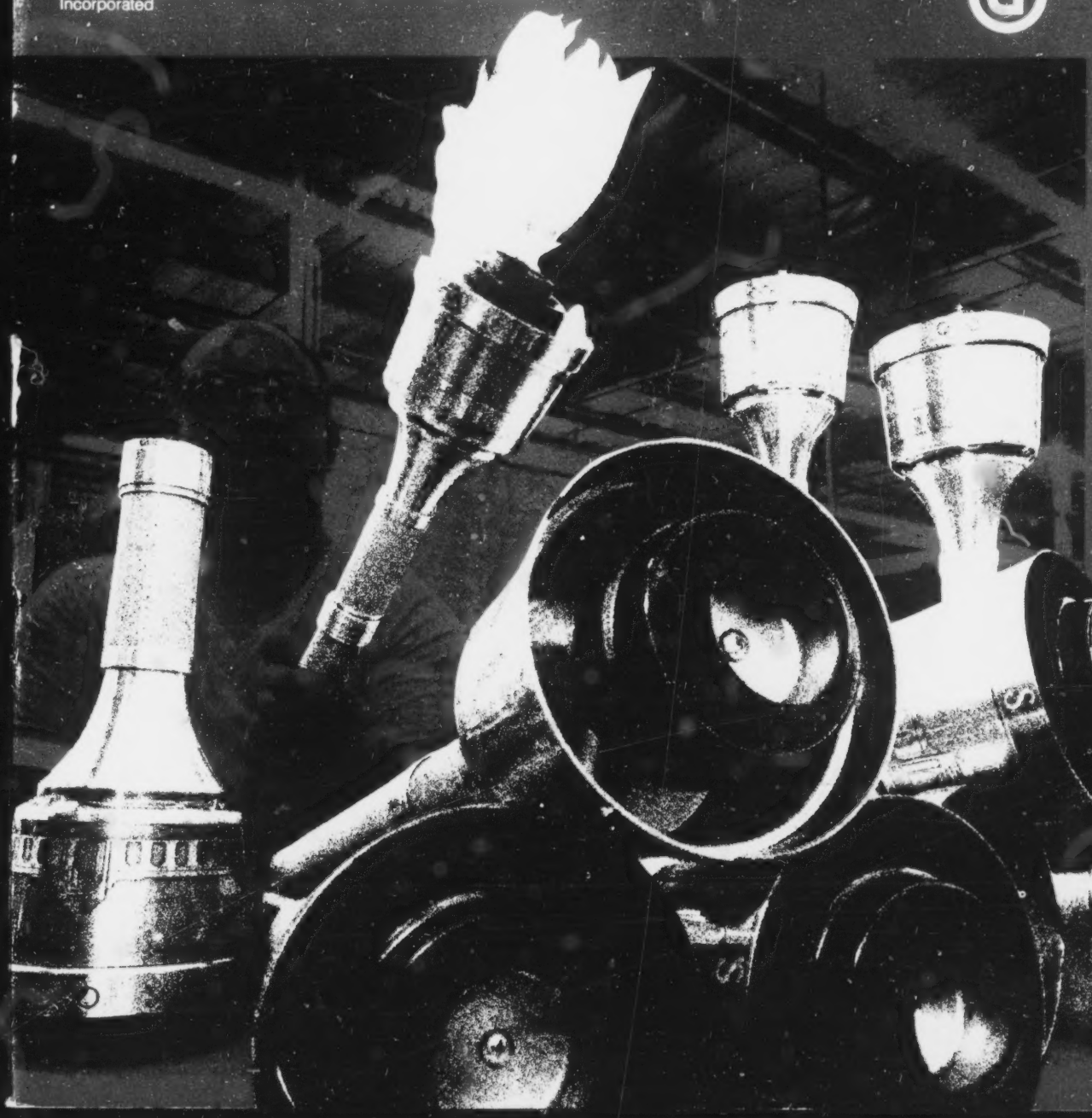

Aluminum statistical review for 1983

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The Aluminum Association does not warrant the accuracy or completeness of any data in this Review. All data contained herein are subject to revision.

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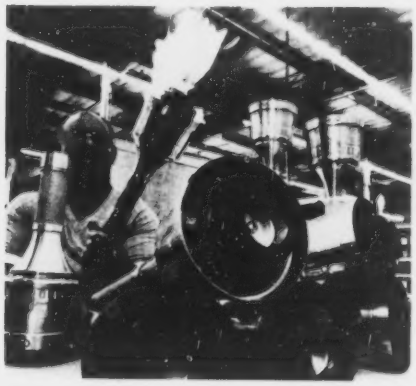

The flames are checked on some of the nearly 4,000 lightweight aluminum torches before they were carried in the 8,700 mile cross-country relay that lead to the opening of the 1984 summer Olympic games in Los Angeles. Just one of the specialized uses for aluminum, the metal was chosen for the torch by Olympic officials because of its lightweight and strength.

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Introduction to Aluminum Statistics

ABOUT THE REVIEW

The Aluminum Association's Statistical Review for 1983 assembles in one place the most important statistical data available on the aluminum industry. It includes information on every cycle of the aluminum production process from primary aluminum to markets for finished goods.

The Aluminum Association, Inc., representing the United States aluminum industry, is the primary source for statistical, standards and information on aluminum and the industry.

The Review is divided into five major sections: shipments, markets, supply, U.S. foreign trade, and world statistics. Each section is preceded by an introduction and description summary of the tables that follow. In addition each graph or table has a description and highlights. The Review shows detailed shipment figures for 23 separate product categories. A glossary of industry terms is appended as well.

Capsule Review

Millions of Pounds	1983	1982
Total Supply	13,557	12,703r
Primary Production	7,393	7,217
Primary Capacity (Year-end)	11,018	11,064
Shipments to Major Markets		
Building & Construction	2,882	2,318r
Transportation	2,385	1,851r
Consumer Durables	1,057	823r
Electrical	1,324	1,158r
Machinery & Equipment	797	706r
Containers & Packaging	3,918	3,568
Other	945	797r
Total Domestic Shipments	13,308	11,221r
Exports	1,241	1,295
Total Shipments	14,549	12,516r

r — Revised

A crucible of molten aluminum holds the liquid that will end up used for any number of products in the major markets for aluminum.

1983 Highlights

The 1983 picture looks very good. Total aluminum shipments were up with net shipments* totaling 14,549 million pounds for 1983, an increase of 16.2 percent over 1982.

Containers and packaging continue to be the industry's largest market for the fifth year in a row with a volume of 3,918 million pounds, and accounting for 26.9 percent of total 1983 shipments. This market registered an increase over 1982 of 9.8 percent.

Building and construction, the industry's second largest market in 1983 with 2,882 million pounds, increased 24.3 percent from 1982.

Transportation shipments increased by 28.8 percent to 2,385 million pounds or 16.4 percent of total aluminum shipments.

The **Electrical** market showed an increase of 14.3 percent vs. 1982 at 1,324 million pounds.
Consumer durables shipments registered a 28.4 percent increase to a 1,057 million pound volume in 1983.

*"Net" shipments exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

Shipments to the nonelectrical **Machinery and equipment** market were up 12.9 percent Shipments to "Other" or "miscellaneous" identified markets totaled 949 million pounds, an increase of 18.6 percent from 1982.

Total shipments to domestic markets at 13,308 million pounds were up 18.6 percent from the 1982 level of 11,221 million pounds. Exports dropped 4.2 percent from 1982.

The United States supply of aluminum in 1983 was up 6.7 percent at 13,557 million pounds. Domestic primary production increased 2.4 percent to 7,393 million pounds. Primary imports increased 20.5 percent, and imports of mill products went up 35.7 percent. Domestic recovery from scrap accounted for 3,908 million pounds, a 6.4 percent increase.

The U.S. was again a net importer of aluminum in 1983, with imports exceeding exports by 646 million pounds. Total imports increased 25.3 percent to 2,465 million pounds. Exports including scrap were up 5.6 percent to 1,819 million pounds.

Supplier's inventories declined 1,190 million pounds by year-end to 5,009 million pounds. Additional inventory data are presented on page 24.

Acknowledgements

The data in this **REVIEW** were developed by the Statistical and Marketing Research Committee of the Aluminum Association, Inc. with the kind cooperation of the following organizations: National Association of Aluminum Distributors; the Bureau of Industrial Economics and the Bureau of the Census, U.S. Department of Commerce; and the Bureau of Mines of the U.S. Department of the Interior.

Aluminum Association staff member, Nicholas A. Adams, Jr., prepared the **REVIEW** for publication.

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Companion Publication

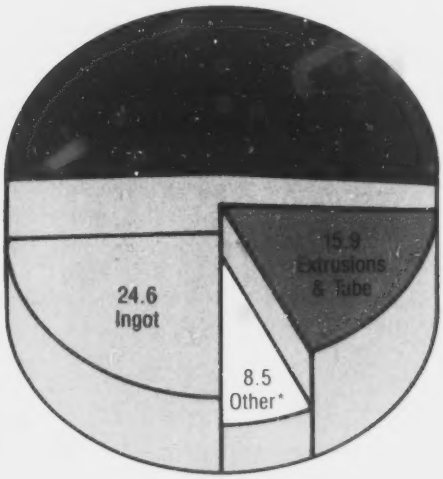
Aluminum Statistical Review-Historical Supplement

Historical tables covering the years 1960-1980 with some tables covering years prior to 1960.

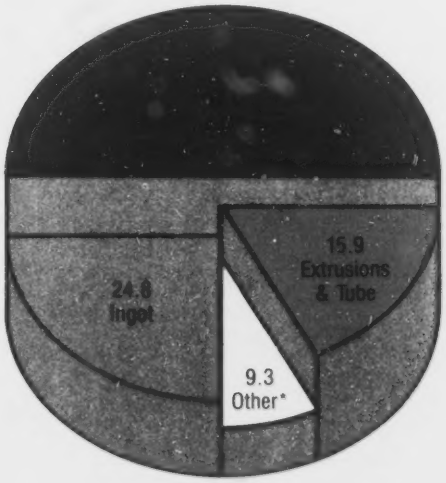
Contact the Aluminum Association for further information.

U.S. Aluminum Industry Shipments

Percentage Distribution by Major Products: 1983



Percentage Distribution by Major Products: 1982



*Other

Conductor	4.9 (5.1)
Rod, Bar, Wire, Forgings & Impacts	2.6 (2.8)
Powder	0.6 (0.7)
Welded Tube	0.4 (0.4)

NOTE: 1982 percentages are shown in parentheses

SHIPMENTS UP 16.2 PERCENT

Total net shipments in 1983 amounted to 14,549 million pounds, 16.2 percent more than the 12,516 million pounds shipped in 1982.

The adjacent chart shows that the largest product category of sheet, plate and foil represented 51.0 percent of total shipments in 1983 (50.0% in 1982). Ingot for castings, destructive uses and exports accounted for 24.6 percent (24.8% in 1982) and extruded products and tube shipments were 15.9 percent (16.2% in 1981) of total shipments.

Including net imports, sheet and plate and foil volume of 7,681 million pounds were up 19.1 percent from 1982. Extruded products and tube shipments totaled 2,285 million pounds, up 13.8 percent from 1982.

Total shipments to U.S. consumers at 13,308 million pounds were up 18.6% from the 1982 level of 11,221 million pounds. Exports dropped 4.2 percent from their 1982 level of 1,295.

DESCRIPTION:

Total aluminum industry shipments presented on the next page are net shipments to U.S. consumers and for export. To avoid duplication, the figures do not include any intra-industry shipments for further fabrication into mill products. Imported ingot and mill products shipped to U.S. consumers are included.

Net shipments of ingot include domestic and import shipments and represent primary and secondary ingot shipments for export, for castings and destructive uses. Net shipments of mill products are shown separately for domestic and import. Mill product imports to aluminum producers are not included in total industry shipments,. These imports are further processed by the producer into another mill product which is included in the total.

Imports to consumers are included in total industry shipments. These consumers fabricate the aluminum into a finished product. Imported mill products are net of receipts by producers of mill products. Imported mill products data include reimports of metal exported for processing and returned for further processing.

The pie charts illustrate the distribution of net shipments of aluminum ingot and mill product groups during 1983 and 1982. They include net shipments of ingot and domestic mill products but exclude imported mill products, because import data are not available in the same detail as domestic shipments of mill products. The distribution is based on data shown on pages 6 and 7. The imported mill products are shown on page 5.

For information on years prior to 1973 see the Aluminum Statistical Review—Historical Supplement.

Total Industry Shipments
1973-1983

Millions of Pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Net Shipments											
Total	14,548.5	12,516.2r	13,814.4r	14,351.0r	14,867.3	14,425.3	12,986.0	12,425.1	9,928.5	13,730.2	14,684.5
Ingot	3,449.7	3,012.0r	3,236.4r	3,723.8r	3,287.0	2,672.3	2,388.3	2,540.1	2,377.7	3,178.4	3,668.4
Mill Products											
U.S. Producer	10,562.9	9,116.2r	10,337.8r	10,484.9	11,230.4	11,346.0	10,442.9	9,705.6	7,426.6	10,461.0	10,899.8
Imported	535.9	388.0	240.2	142.3	349.9	407.0	154.8	178.3	124.3	90.8	116.2
U.S. Exports	1,240.9	1,294.7	1,370.0	2,193.3	1,022.9	747.4	712.2	820.5	805.0	927.1	925.2
U.S. Consumers[1]	13,307.6	11,221.5r	12,444.4r	12,157.7r	13,844.4	13,677.9	12,273.8	11,604.6	9,123.5	12,803.1	13,759.3

Detail may not add to totals due to rounding

SOURCES: Current Industrial Report Series M33-2
Mill products: exports, imports: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division, and CIR Series M33-2

(1) Shipments to consumers in the U.S. are calculated by subtracting exports of ingot and mill products from total industry shipments. Includes no adjustment for inventories in the hands of consumers.

Mill Products Imports
1973-1983

Millions of Pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Total Imports[1]											
Total	618.3	455.6	303.9	168.1	426.3	484.5	164.8	189.0	130.2	109.7	138.2
Sheet & Plate	531.1	414.8	247.1	126.1	357.3	433.7	128.7	150.5	107.1	69.7	99.5
Rod & Bar	27.4	10.1	34.2	16.3	38.0	22.1	18.1	20.9	12.7	18.8	13.2
Other	59.8	30.7	22.6	25.7	31.0	28.7	18.0	17.6	10.4	21.2	25.5
Imports to Consumers[1]											
Total	535.9	388.0	240.2	142.3	349.9	407.0	154.8	178.3	124.3	90.8	116.2
Sheet & Plate	476.3	357.7	205.6	115.7	317.0	371.0	124.7	144.8	106.6	53.9	80.1
Rod & Bar	0.2	1.3	12.3	9.1	2.2	9.7	12.4	16.1	7.3	15.7	10.6
Other	59.4	29.1	22.3	17.5	30.7	26.3	17.7	17.3	10.4	21.2	25.5
Imports to Producers[2]											
Total	82.4	67.6	63.7	25.8	76.4	77.5	10.0	10.8	5.9	18.9	22.0
Sheet & Plate	54.8	57.2	41.5	10.4	40.3	62.7	4.0	5.7	0.5	15.8	19.4
Rod & Bar	27.2	8.8	21.9	7.2	35.8	12.4	5.7	4.8	5.4	3.1	2.6
Other	0.4	1.6	0.3	8.2	0.3	2.4	0.3	0.3	*	—	—

**Less than 50 thousand pounds*

Detail may not add to totals due to rounding

(1) Starting in 1970, includes reimports of metal exported for processing and returned for further processing (TSUSA 806.30)

(2) Product detail estimated by Aluminum Association from published ranges

SOURCES: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division and CIR Series M33-2

Net Shipments of Ingot and Mill Products
Excludes Mill Product Imports to Consumers 1946-1983

Millions of Pounds

Year	Total aluminum	Total Ingot	Primary Ingot	Secondary[3][4] Ingot	Extusion[5] Ingot	Total mill products	Plate, sheet & strip					Forgings[2] Impacts[2]	
1946	1,670.0	529.2	—	—	—	1,140.8	867.0						
1947	2,040.0	631.8	—	—	—	1,408.2	1,111.2						
1948	2,270.0	629.8	—	—	—	1,640.2	1,268.3						
1949	1,638.0	479.9	—	—	—	1,158.1	790.0						
1950	2,438.0	724.6	—	—	—	1,713.4	1,163.1						
1951	2,466.0	709.8	—	—	—	1,756.2	1,073.4						
							Sheet & Plate						
							nonheat treatable		heat treatable		Foil		
1952	2,661.6	811.2	339.8	471.4	—	1,850.4	641.4		288.0		85.4		
1953	3,211.2	982.9	383.1	599.8	—	2,228.2	856.9		322.2		119.2		
1954	3,006.8	920.2	425.7	494.5	—	2,086.6	768.2		243.6		153.3		
1955	3,997.2	1,205.4	509.9	695.5	—	2,791.8	1,049.6		295.0		198.2		70.3
1956	4,109.3	1,223.5	520.1	703.4	—	2,885.8	1,050.6		327.0		190.5		75.7
1957	3,839.2	1,161.6	458.2	703.4	—	2,677.6	948.8		248.7		204.0		64.3
1958	3,571.1	974.0	368.6	605.4	—	2,597.1	944.4		209.1		199.6		50.8
1959	4,961.1	1,575.0	751.4	803.4	20.2	3,386.1	1,284.6		231.3		252.6		53.8
1960	4,657.7	1,608.6	852.3	665.2	91.1	3,049.1	1,203.4		184.8		249.0		50.1
1961	4,881.7	1,536.6	690.7	701.9	144.0	3,345.1	1,256.3		237.0		270.6		56.4
							Sheet		Plate				
							NHT	HT	NHT	HT			
1962	5,669.8	1,858.6	768.9	848.7	241.0	3,811.3	1,361.8	157.3	108.9	82.9	297.4		79.4
1963	6,289.7	2,032.6	859.2	885.9	287.5	4,257.2	1,626.5	165.2	126.5	77.1	322.3		84.0
1964	7,063.5	2,228.6	946.5	995.1	287.0	4,834.9	1,903.0	167.8	124.2	79.0	356.7		88.4
1965	8,016.7	2,337.3	1,069.3	1,126.9	141.1	5,679.4	2,179.8	223.0	109.0	97.0	395.7		96.4
1966	8,797.6	2,340.1	987.2	1,190.4	162.6	6,457.5	2,382.4	281.5	125.7	147.2	432.2		139.2
1967	8,836.9	2,486.4	1,063.6	1,189.1	233.7	6,350.6	2,385.6	227.4	119.5	135.6	449.4		165.2
1968	9,861.8	2,694.8	1,154.2	1,284.3	256.3	7,167.0	2,910.8	250.2	103.5	140.0	508.7	105.7	62.1
1969	10,717.5	3,051.2	1,569.4	1,264.9	216.9	7,666.3	3,299.3	200.8	105.8	120.9	559.9	97.3	59.3
1970	9,952.5	2,594.5	1,307.0	1,126.0	161.5	7,358.0	3,376.4	126.7	94.1	91.4	558.7	71.4	49.0
1971	10,267.3	2,428.5	1,004.5	1,187.7	236.3	7,838.8	3,691.1	121.6	75.6	87.8	585.6	69.5	28.7
1972	11,880.0	2,633.8	1,000.7	1,467.9	165.2	9,246.2	4,431.4	160.6	78.8	97.1	673.2	95.3	27.5
1973	14,568.2	3,668.4	1,615.7	1,757.8	294.9	10,899.9	5,308.7	203.3	109.7	119.6	774.4	114.8	27.6
1974	13,639.5	3,178.4	1,503.5	1,457.4	217.4	10,461.1	5,087.9	216.5	157.2	164.6	748.2	112.8	25.5
1975	9,804.2	2,377.7	1,275.0	1,019.1	83.5	7,426.6	3,676.8	121.0	143.2	111.2	611.8	82.8	14.4
1976	12,245.6	2,540.1	1,108.5	1,227.6	203.9	9,705.6	5,167.0	191.9	108.4	106.5	772.3	83.1	17.1
1977	12,831.3	2,388.3	768.5	1,443.6	176.2	10,443.0	5,505.5	300.4	104.2	130.3	805.6	105.7	15.6
1978	14,018.4	2,672.3	923.3	1,658.7	90.3	11,346.0	5,785.4	350.0	116.1	157.1	875.6	115.7	20.7
1979	14,517.3	3,287.0	1,281.2	1,830.7	175.1	11,230.3	5,632.4	365.4	114.9	183.5	887.0	127.4	31.4
1980	14,208.7r	3,723.8r	1,958.3	1,582.1	183.5r	10,484.9	5,301.8	247.3	92.2	220.9	830.4	107.2	26.0
1981	13,574.2r	3,236.4r	1,485.3	1,704.5	46.6r	10,337.8r	5,504.0	200.9	106.1	167.1	850.4	109.2	29.8
1982	12,128.1r	3,012.0r	1,518.9	1,473.2	19.9r	9,116.2r	4,976.9	150.1	70.9	131.2	731.2	78.9	25.3
1983	14,012.6	3,449.7	1,860.0	1,499.2	90.4	10,562.9	5,934.3	181.9	57.5	145.4	825.5	88.6	27.6

(1) A small amount of rolled structural shapes is included with the rod & bar in 1946-1961 and with extruded shapes in subsequent years.

(2) Through 1954 forgings and impacts were not reported. They were included in appropriate forging stock product categories, mainly rolled rod & bar instead of forgings.

(3) 1952-1958 Secondary ingot included extrusion ingot.

(4) Secondary ingot includes shipments by integrated companies, secondary smelters and imports.

Detail may not add to totals due to rounding.

Extruded shapes, tube blooms, and tubing						Rod, bar & wire[1]				Powder
126.1						130.6				17.2
123.0						157.4				16.6
171.9						183.0				17.0
150.0						203.6				14.5
258.1						269.8				22.5
312.9						345.2				24.8
Extruded Shapes				Tubing						
Soft alloys		Hard alloys		Soft alloys		Hard alloys	Rod & bar[1]	Wire, bare (non conductor)	ACSR & bare cable	Ins. or Cov. wire & cable & wire, bare (conductor)	
206.2		81.0		46.4		14.2	197.3	42.7	174.7	23.4	49.7
312.6		80.5		55.2		14.1	218.6	45.7	134.0	24.7	44.4
								Wire bare			
								Non Conductor	Conductor	Ins. or cov. wire & cable	
385.8		63.8		53.5		10.1	143.7	41.8	3.8	147.1	25.0	46.9
				Drawn tube		Welded tube						
636.6		45.8		67.2		25.5	109.9	57.7	4.0	156.9	39.5	35.7
641.0		63.5		60.2		27.6	117.8	54.4	5.5	187.4	56.1	28.4
								Wire, bare				
645.6		61.2		56.2		26.7	116.9	50.4		181.5	50.3	28.2
693.5		49.8		59.8		18.7	75.6	44.2		174.8	51.0	25.6
931.3		47.9		72.9		30.0	124.6	64.6		196.7	60.8	34.9
812.1		38.9		60.3		25.9	92.9	55.4		183.1	60.4	32.8
884.1		50.5		64.0		35.4	100.8	52.6		232.8	68.6	35.9
Extruded rod & bar		Extruded shapes[1]		Extruded pipe & tube								
Soft	Hard	Soft	Hard	Soft	Hard							
54.8	12.6	782.4	44.8	139.5	5.2	78.4	40.7	136.4	55.0	253.2	76.9	43.7
61.1	10.2	870.7	54.2	150.3	6.1	65.5	52.1	121.0	57.6	272.3	89.2	44.8
						Drawn tube						
						Soft	Hard					
70.5	12.6	1,016.4	41.0	158.2	4.3	60.3	6.6	77.4	146.8	63.1	309.2	103.2	46.3
68.2	14.8	1,224.3	57.5	174.9	2.7	78.8	3.7	93.7	159.7	82.6	429.3	129.4	58.8
67.2	21.5	1,335.3	97.7	190.6	6.9	92.2	7.5	91.2	151.9	103.2	507.4	165.3	111.4
43.6	18.4	1,222.7	84.5	157.4	8.5	81.7	7.5	87.8	143.0	97.7	506.2	174.7	234.0
37.3	21.1	1,363.0	70.0	170.2	11.8	84.6	8.0	106.9	130.0	100.4	492.2	214.0	276.4
42.2	21.1	1,460.2	72.3	196.1		81.8	7.2	101.6	144.3	94.7	475.1	250.5	276.0
39.7	16.8	1,369.2	43.4	176.9		80.7	3.5	92.5	110.0	93.5	499.5	260.2	204.5
37.7	16.4	1,550.6	42.1	186.1		81.6	2.7	96.3	102.2	96.8	481.8	317.1	167.5
40.5	16.6	1,838.4	44.6	193.8		89.1	3.7	116.6	181.5	106.6	453.6	371.0	226.4
48.3	18.9	2,038.6	72.2	225.6		105.7	4.6	121.7	289.4	124.1	490.2	445.2	257.4
48.8	14.9	1,807.3	66.4	219.4		110.4		116.8	268.6	131.0	541.4	446.3	177.2
55.7	12.1	1,264.3	47.7	135.9		65.7		61.6	185.8	66.3	425.1	246.3	98.9
69.9		1,661.8	28.9	188.8		98.0		94.2	279.9*(6)*	79.9*(6)*	321.4	304.1	132.4
82.5		1,845.5	65.4	183.8		104.3		114.5	145.5*(6)*	85.3*(6)*	351.0	376.7	121.1*(7)*
113.7		2,021.9	93.2	176.8		106.7		110.4	266.5	89.3	390.3	419.6	135.9
100.9		1,990.1	104.2	151.9		95.9		83.5	300.0	91.3	417.4	427.5	125.6
113.0		1,791.2	107.3	140.7		80.7		96.8	377.6	72.2	399.8	363.2	116.6
102.9		1,732.9	69.9	127.3r		74.6		114.2	272.0	68.3	378.7	321.6r	107.7
75.4r	19.4r	1,654.8	48.5	91.8r	11.4r	60.9		47.9	190.4	50.8	345.2	276.0r	80.0
89.2	25.4	1,855.6	55.0	124.7	14.3	65.2		56.4	191.1	55.8	357.4	333.3	78.7

(5) Extrusion ingot includes primary and secondary metal shipments by integrated companies, non-integrated companies, secondary smelters and imports includes exports and overstated domestic shipments due to insufficient reporting of receipts.

(6) Bare wire estimated by the Aluminum Association from part year reporting.

(7) Powder, n.e.c., included for only nine months of 1976 and excluded entirely for 1977.

SOURCE: U.S. Department of Commerce, Bureau of The Census, Industry and Trade Administration, Bureau of Domestic Business Development, Office of Basic Industries—Current Industrial Reports since 1960; Facts for Industry 1959 and earlier.

General Line Distributor Shipments

DISTRIBUTOR SHARE 29.2 PERCENT

During 1983, distributors captured 29.2 percent of their available market. Total U.S. shipments of mill products, excluding direct mill uses, was 4,113 million pounds, up 28.6 percent from 1982. Distributor shipments at an estimated 1,244 million pounds were up 31.2 percent from a year ago. Shares increased in all but pipe & tube.

DESCRIPTION:

The table shows general line distributor shipments as estimated by the Management Information Committee of the National Association of Aluminum Distributors for the years 1973-1983. Also shown are estimates of the total market in which general line distributors are participants. This is labeled Total U.S. Shipments, excluding Direct Mill Uses.

For information on years prior to 1973, see the Aluminum Statistical Review—Historical Supplement.

Direct mill uses are excluded because these end product manufacturers do not buy from distributors. In some cases producers make the final products. These uses include residential siding, extruded shapes for all building products, furniture tube, conduit, irrigation pipe, can stock and exports. Total U.S. shipments excluding direct mill uses thus differ from total aluminum industry shipments of mill products by the amount of direct mill uses and products not generally handled by general line distributors (foil, conductor, forgings, powder).

General Line Distributor Shipments 1973-1983

Millions of pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Distributor Shipments											
Total	1,244	948	1,200	1,274	1,359	1,319	1,212	1,148	753	1,195	1,210
Sheet	821	598	778	747	816	812	758	753	435	708	738
Plate	118	104	120	155	152	138	112	92	77	128	106
Rod, bar & wire	131	106	140	161	176	161	137	116	85	134	142
Extruded shapes	121	94	107	151	149	138	136	121	105	147	149
Pipe & tube	53	46	55	60	66	70	69	66	51	78	75
Total U.S. Shipments excluding Direct Mill Uses											
Total	4,113	3,198	3,835	3,832	4,327	5,095	4,442	4,158	2,903	4,600	5,023
Sheet	2,771	2,056	2,484	2,302	2,598	3,359	3,013	2,772	1,842	2,911	3,370
Plate	191	189	240	266	281	253	215	196	210	295	213
Rod, bar & wire	335	275	331	379	407	398	286	376	257	418	420
Extruded shapes	675	589	632	710	859	864	741	662	487	782	792
Pipe & tube	141	89	148	175	182	221	187	152	107	194	228
Distributor share (per cent)											
Total	29.2	29.6	31.3	33.3	31.4	25.9	27.3	27.6	25.9	26.0	24.1
Sheet	29.6	29.1	31.3	32.5	31.4	24.2	25.2	27.2	23.6	24.3	21.9
Plate	61.8	55.0	50.0	58.3	54.1	54.5	52.1	46.9	36.7	43.4	49.8
Rod, bar & wire	39.1	38.6	42.3	42.5	43.2	40.4	47.9	30.9	33.1	32.1	33.8
Extruded shapes	17.9	16.0	16.9	21.3	17.4	16.0	18.4	18.3	21.6	18.8	18.8
Pipe & tube	37.6	51.7	37.2	34.3	36.3	31.7	36.9	43.4	47.7	40.2	32.9

NOTE: In this table rod, bar and wire includes extruded rod and bar; pipe and tube includes extruded, drawn and welded pipe and tube.
SOURCE: Estimated by the Management Information Committee of the National Association of Aluminum Distributors.

Shipments of Castings

SHIPMENTS DOWN 6.6 PERCENT

There were 1,500 million pounds shipped during 1983 versus the prior year's 1,605 million pounds. Of the total shipments, die castings accounted for 64 percent (66 percent in 1982), permanent mold castings, 19 percent (15 percent in 1982), sand castings, 15 percent (11 percent in 1982) and other castings, 2 percent (8 percent in 1982). Shipments for sale represented 87 percent of sand castings, 52 percent of permanent mold castings and 46 percent of die castings.

DESCRIPTION:

This table shows shipments of aluminum castings separately for sand, permanent mold and die castings, both for sale and own use. Own use shipments are for captive consumption in the producers' end products.

Ingot requirements for the castings shipments shown in this table are part of the net ingot shipments shown on pages 5 & 6.

Shipments of Castings
1963-1983

Millions of Pounds

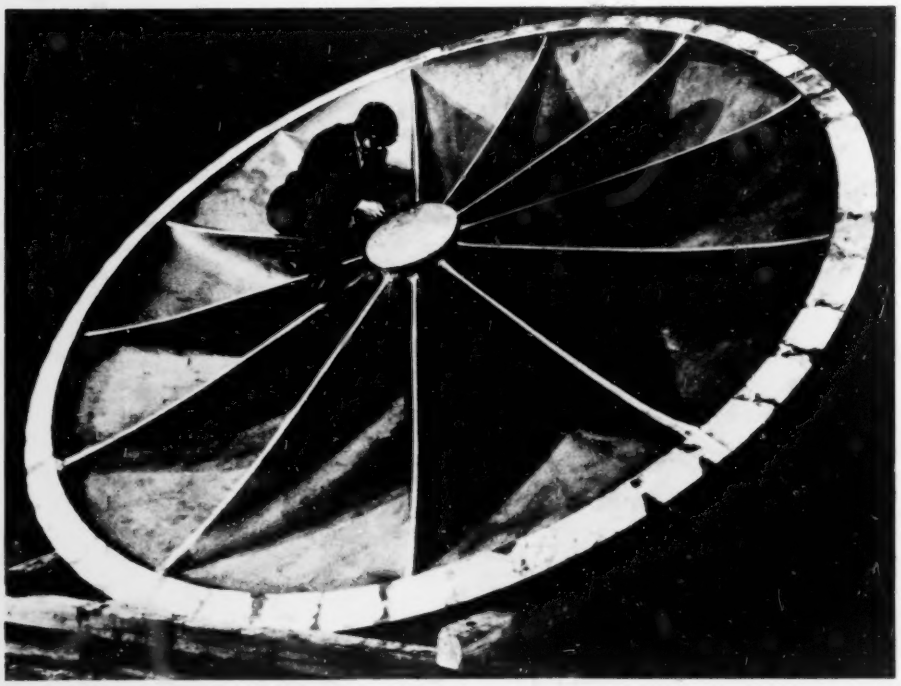
Year*	Total Castings[1]	Sand Castings		Permanent and Semi-permanent Mold Castings		Die Castings	
		for sale	own use	for sale	own use	for sale	own use
1963	1,209.3	160.1	42.1	169.6	159.3	281.2	390.4
1964	1,257.2	168.9	60.6	179.3	137.4	312.6	386.3
1965	1,416.7	193.6	72.7	185.2	134.8	391.3	431.7
1966	1,654.1	220.6	68.0	233.3	156.1	478.7	477.8
1967	1,488.7	155.3	74.1	203.6	126.8	472.2	434.7
1968	1,615.2	148.9	58.7	201.5	158.7	510.5	518.3
1969	1,731.0	155.8	59.5	245.5	160.0	510.9	573.7
1970	1,541.9	127.0	65.5	188.7	132.3	472.3	530.7
1971	1,616.8	122.7	62.4	200.2	118.3	500.5	595.4
1972	1,915.6	158.8	62.4	236.6	143.8	595.8	685.8
1973	2,113.2	184.1	65.9	247.6	147.8	680.0	735.4
1974	1,855.4	200.4	58.1	220.1	114.6	617.3	585.5
1975	1,455.2	146.5	42.9	159.7	90.7	461.4	496.1
1976	1,971.1	170.3	41.3	203.4	121.8	606.5	721.7
1977	2,153.4	186.6	33.3	228.0	145.2	682.6	763.0
1978	2,286.8	210.9	34.9	238.5	148.6	799.8	718.1
1979	2,302.8	245.5	33.2	265.4	142.2	853.1	663.6
1980	1,689.8	200.0	33.1	217.2	105.9	633.8	429.2
1981	1,819.8	207.3	30.8	209.2	82.3	704.1	452.7
1982	1,605.3	159.0	19.5	161.9	77.2	624.2	434.0
1983	1,499.5	195.1	28.2	147.0	133.5	442.7	518.4

(1) Total includes small amounts of "other" castings not shown separately

SOURCE: U.S. Department of Commerce, Bureau of the Census, Industry Division

** Prior to 1963, consult the Aluminum Statistical Review—Historical Supplement.*

NOTE: All data for the years 1963 through 1982 were revised by the Bureau of the Census, April, 1984.



One of the largest single-piece aluminum castings ever made, this 13½-foot, three ton parabolic die is used for fabricating "dish" antennae that track weather and communications satellites.

Shipments by Major Market

SHIPMENTS UP 16.2 PERCENT
Total industry shipments of aluminum in 1983 of 14,549 million pounds were up 16.2 percent from the volume of 12,516 million pounds in 1982. Total domestic shipments rose 18.6 percent while exports dropped 4.2 percent.

The largest volume increase occurred in Building and Construction, up 564 million pounds, while Transportation experienced the largest percentage increase, +28.8%.

Containers and Packaging continue as the industry's largest market in 1983 with a volume of 3,918 million pounds, or 26.9 percent of total shipments. Increased shipments for metal cans at 3,140 million pounds led this market's 9.8 percent growth over 1982. Semirigid food containers, household and institutional foil, caps & closures, collapsible tubes and many flexible packaging uses are other important components in this market.

Building and Construction, the industry's second market at 2,882 million pounds, increased 24.3 percent due to the turnaround in construction activity. Included in this market are residential, industrial, commercial, farm and highway applications as well as mobile homes.

Shipments to the **Transportation** market also increased. Volume of 2,385 million pounds was 28.8 percent higher than in 1982. Increased shipments for passenger cars, aircraft and aerospace, marine and rail and recreational vehicles accounted for most of the rise.

Electrical market applications showed a 14.3 percent rise to a 1,324 million pound volume in 1983. Wire and cable products rose 11.7 percent.

Shipments to the **Consumer Durable** goods market experienced a 28.4 percent increase to a volume of 1,057 million pounds. Uses such as appliances, air conditioning, furniture and sporting goods and cooking utensils all showed increases.

Shipments to the nonelectrical **Machinery and Equipment** market of 797 million pounds were 12.9 percent above 1982 and accounted for 5.5 percent of the total. Uses include agricultural, construction and industrial machinery, irrigation pipe, ladders, fasteners and other general industrial equipment.

Exports of aluminum totalling 1,241 million pounds declined 4.2 percent below 1982 levels and accounted for 8.5 percent of total shipments.

The **average annual growth rate** for aluminum shipments in the 1973-1983 period was 0.8 percent. The highest year in this decade was 1979 with 14,867 million pounds. The low point was 9,931 million pounds which occurred in the recession year 1975.

DESCRIPTION:
The Statistical and Marketing Research Committee of The Aluminum Association, Inc. has developed an annual breakdown of total aluminum industry shipments by major market since 1960. End use data on U.S. aluminum shipments are not available from government sources on a regular basis. Aluminum consumption figures for some industries are published by the U.S. Department of Commerce in the Census of Manufactures. The most recent such Census covers the year 1982.

In the United States the aluminum industry has identified its major markets as building and construction, transportation, consumer durables, electrical, machinery and equipment, containers and packaging, exports and other end uses. Each of these major markets has a wide range of end uses within it.

Tables on pages 13-17 show considerable detail on the major markets for 1973-1983. Pages 18-20 also depict trends for 1973-1983 in selected markets where the Aluminum Association has marketing programs, or which are important aluminum markets.

For information on years prior to 1973 see the Aluminum Statistical Review—Historical Supplement.

Selected Market Shipment Highlights—1983

Total Shipments—Up 16.2%

- Exports down 4.2%
- Domestic shipments up 18.6%

Containers & Packaging—Up 9.8%

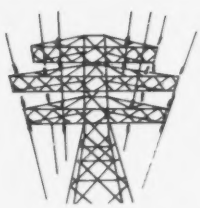
- Still No. 1 market—26.9% of total
- Aluminum now 92% all beverage cans
- 3.9 billion pounds

Building & Construction—Up 24.3%

- 2.9 billion pounds—19.8% of total
- Highest volume since 1979

Transportation—Up 28.8%

- 2.4 billion pounds—16.4% of total
- Passenger car usage up 34.5%



Electrical—Up 14.3%

- Conductor wire & cable up 11.7%

Consumer Goods—UP 28.4%

- Highest volume since 1978

Shipments by Major Market

Aluminum Net Shipments* by Major Market

Millions of Pounds

Major Market	1983 % Distribution	1983 Amount	1982 % Distribution	1982 Amount	1983-1982 % Change	1973-1983 % Annual Growth
Building & construction	19.8	2,882	18.5	2,318r	+ 24.3	- 2.0
Transportation	16.4	2,385	14.8	1,851r	+ 28.8	- 1.1
Consumer durables	7.3	1,057	6.6	823r	+ 28.4	- 2.0
Electrical	9.1	1,324	9.3	1,158r	+ 14.3	- 2.8
Machinery & equipment	5.5	797	5.6	706r	+ 12.9	- 1.5
Containers & packaging	26.9	3,918	28.5	3,568	+ 9.8	+ 6.4
Other (inc. statistical adjustment)**	6.5	945	6.4	797r	+ 18.6	+ 1.1
Domestic, total	91.5	13,308	89.7	11,221r	+ 18.6	+ 0.3
Exports	8.5	1,241	10.3	1,295	- 4.2	+ 6.5
INDUSTRY TOTAL	100.0	14,549	100.0	12,516r	+ 16.2	+ 0.8

N.A. Not applicable

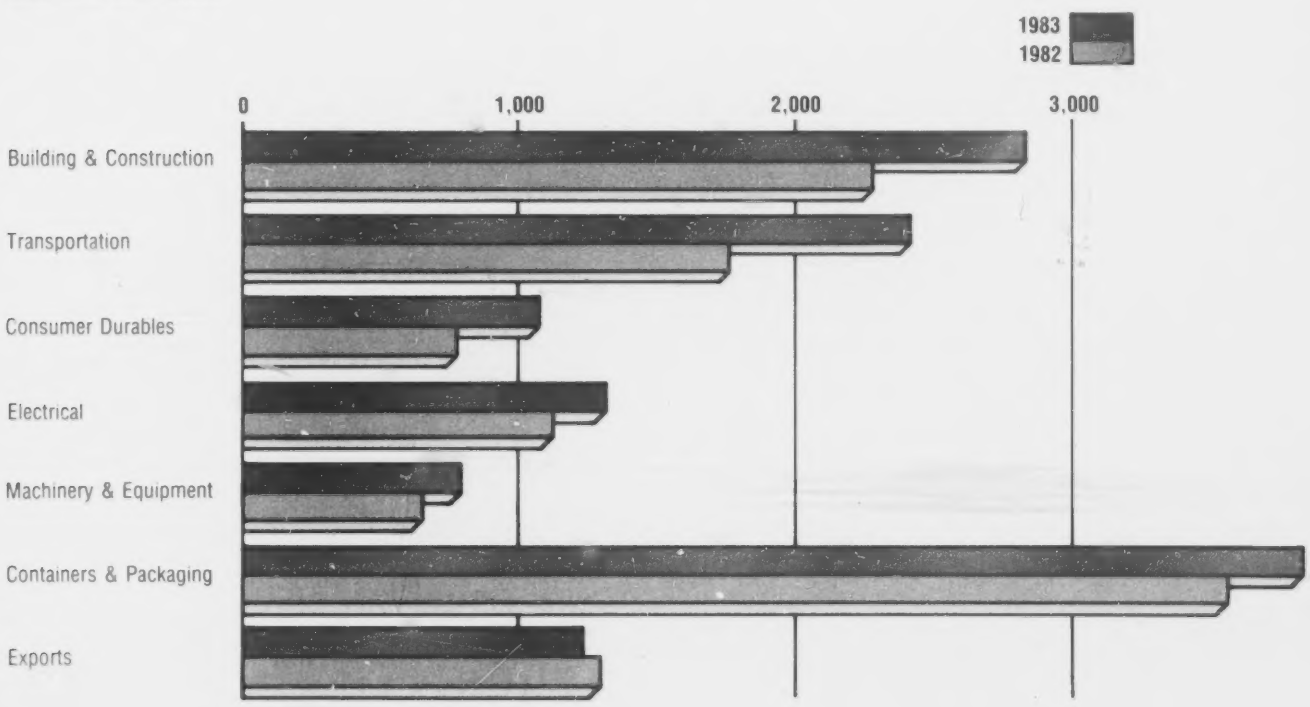
r — Revised

* "Net Shipments" exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.

** "Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net-shipments that the Aluminum Association feels are more correct.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Aluminum Net Shipments* by Major Market



Product Net Shipments* by Major Market
1973-1983

Millions of pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Total Aluminum											
Building & construction	2,882	2,318r	2,553r	2,624r	3,058r	3,226r	3,010r	2,824r	2,225r	3,135r	3,626
Transportation	2,385	1,851r	2,204r	2,247r	3,120r	3,157r	2,913r	2,476r	1,709r	2,382r	2,813
Consumer durables	1,057	823r	1,000r	892r	1,055r	1,205r	1,077r	1,047r	756r	1,153r	1,339
Electrical	1,324	1,158r	1,351r	1,405r	1,588r	1,502r	1,362r	1,274r	1,216	1,836r	1,854
Machinery & equipment	797	706r	881r	844r	985r	1,056r	928r	906r	648r	1,037r	949
Containers & packaging	3,918	3,568	3,512	3,334	3,223	3,141	2,780	2,585	2,014	2,280	2,068
Other	594	535r	645r	600r	652r	660r	597r	592r	544r	745r	870
**Statistical adjustment	+351	+262r	+298r	+212r	+163r	−269r	−394r	−100r	+12	+235r	+240
Domestic, total	13,308	11,221r	12,444r	12,158r	13,844	13,678	12,273	11,604	9,124	12,803	13,759
Exports	1,241	1,295	1,370	2,193	1,023	747	713	821	805	927	925
Aluminum Total	14,549	12,516r	13,814r	14,351r	14,867	14,425	12,986	12,425	9,929	13,730	14,684
Ingot (1)											
Building & construction	101	86r	90r	86r	114r	109r	110r	104r	164r	238r	247
Transportation	1,132	888r	1,017r	960r	1,349r	1,311r	1,260r	1,149r	829r	994r	1,302
Consumer durables	292	259r	291r	265r	350r	374r	351r	343r	257r	351r	412
Electrical	184	165r	190r	176r	224r	213r	198r	188r	220	264r	285
Machinery & equipment	278	249r	293r	274r	354r	363r	311r	299r	231r	332r	335
Containers & packaging	20	15	22	20	15	11	9	12	10	23	26
Other	255	227r	313r	294r	343r	344r	312r	311r	289r	358r	396
**Statistical adjustment	+375	+306r	+314r	+204r	+119r	−306r	−367r	−178r	—	+195	+200
Domestic, total	2,637	2,195r	2,530r	2,279r	2,868	2,419	2,184	2,228	2,000	2,755	3,203
Exports	813	817	706	1,445	419	253	204	312	378	423	465
Ingot Total	3,450	3,012r	3,236r	3,724r	3,287	2,672	2,388	2,540	2,378	3,178	3,668
Mill Products											
Building & construction	2,781	2,232r	2,463r	2,538	2,944	3,117	2,900	2,720	2,061	2,897	3,379
Transportation	1,253	963r	1,187r	1,287r	1,771	1,846	1,653	1,327	880	1,388	1,511
Consumer durables	765	564r	709r	627r	705	831	726	704	499	802	927
Electrical	1,140	993r	1,161	1,229	1,364	1,289	1,164	1,086	996	1,572	1,569
Machinery & equipment	519	457r	588	570	631	693	617	607	417	705	614
Containers & packaging	3,898	3,553	3,490	3,314	3,208	3,130	2,771	2,573	2,004	2,257	2,042
Other	339	308	332r	306r	309	316	285	281	255	387	474
**Statistical adjustment	−24	−44r	−16r	+8r	+44	+37	−27	+78	+12	+40	+40
Domestic, total	10,671	9,026r	9,914r	9,879	10,976	11,259	10,089	9,376	7,124	10,048	10,556
Exports	428	478	664	748	604	494	509	509	427	504	460
Mill Products Total	11,099	9,504r	10,578r	10,627	11,580	11,753	10,598	9,885	7,551	10,552	11,016

NOTE: Total mill products are net shipments of aluminum mill products as reported by domestic producers to the U.S. Department of Commerce, plus imported mill products, less receipts of these imports by domestic producers.

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market
1973-1983

Millions of Pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Sheet											
Building & construction	1,424	1,022	1,190	1,250	1,597	1,749	1,611	1,582	1,147	1,667	1,920
Transportation	568	386	499	499	824	932	865	669	352	591	732
Consumer durables	426	295	380	333	353	424	375	387	287	472	547
Electrical	213	186	242	199	243	239	229	214	131	246	281
Machinery & equipment	278	229	282	258	267	313	265	249	155	278	264
Containers & packaging	3,275	2,977	2,869	2,693	2,559	2,488	2,169	1,971	1,501	1,670	1,443
Other	92	65	74	64	74	82	64	58	61	73	78
**Statistical adjustment	+ 15	+ 15	– 4	– 11	+ 11	+ 8	+ 28	+ 50	+ 38	+ 22	+ 15
Domestic, total	6,291	5,175r	5,532	5,285	5,928	6,235	5,606	5,180	3,672	5,019	5,280
Exports	296	296	368	375	374	265	323	322	230	338	310
Sheet Total	6,587	5,471	5,900	5,660	6,302	6,500	5,929	5,502	3,902	5,357	5,590
Plate											
Building & construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	156	151	179	216	220	190	160	146	161	197	150
Consumer durables	1	1	1	1	1	1	1	1	1	2	1
Electrical	4	4	18	5	10	10	7	6	10	15	14
Machinery & equipment	16	18	29	30	37	41	35	32	28	63	36
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	13	14	12	13	12	10	11	10	9	17	12
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	191	189	240	266	281	253	215	196	210	295	214
Exports	23	27	43	51	30	27	21	21	46	29	18
Plate Total	214	216	283	317	311	280	236	217	256	324	232
Foil											
Building & construction	38	26	35	29	38	37	33	25	21	31	30
Transportation	45	29	32	31	41	45	38	25	16	16	20
Consumer durables	106	77	112	84	112	122	95	83	39	69	87
Electrical	22	19	25	23	30	27	25	23	14	26	26
Machinery & equipment	16	14	17	16	20	21	14	15	12	16	18
Containers & packaging	613	570	614	614	640	633	597	597	501	583	596
Other	4	3	8	5	3	1	1	2	4	4	7
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	844	738	843	802	884	886	803	770	607	745	784
Exports	11	13	21	38	21	12	13	14	10	17	8
Foil Total	855	751	864	840	905	898	816	784	617	762	792
Extruded Shapes											
Building & construction	1,229	1,106	1,163	1,176	1,215	1,235	1,163	1,019	812	1,074	1,302
Transportation	345	284	325	390	499	491	427	350	234	424	437
Consumer durables	103	80	88	96	117	133	106	94	70	109	113
Electrical	74	72	76	88	106	101	89	94	78	117	114
Machinery & equipment	75	72	80	88	108	115	88	81	72	84	79
Containers & packaging	3	—	—	—	1	—	—	—	—	—	—
Other	75	81	63	37	28	24	31	43	33	48	49
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	1,904	1,695	1,795	1,875	2,074	2,099	1,904	1,681	1,299	1,856	2,094
Exports	10	9	9	25	22	17	9	10	14	18	17
Extruded Shapes Total	1,914	1,704	1,804	1,900	2,096	2,116	1,913	1,691	1,313	1,874	2,111

Product Net Shipments* by Major Market
1973-1983

Millions of Pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Extruded Pipe & Tube											
Building & construction	31	31r	23r	23	31	29	31	33	27	42	46
Transportation	23	17r	20r	16r	18	24	21	18	14	18	20
Consumer durables	28	25r	22r	24r	21	28	22	18	13	19	21
Electrical	60	49	51	62	37	41	44	46	35	56	69
Machinery & equipment	17	17r	21	26	29	35	45	53	31	65	55
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	4	3	4r	4r	2	2	2	3	3	6	8
**Statistical adjustment	−30	−50r	−27r	29	—	—	—	—	—	—	—
Domestic, total	133	92r	114r	126	138	159	165	171	123	206	219
Exports	9	12	14	15	15	18	20	19	14	15	10
Extruded Pipe & Tube Total	142	104r	128r	141	153	177	185	190	137	221	229
Drawn Tube											
Building & construction	3	2	3	3	3	3	4	3	3	6	6
Transportation	6	5	8	11	17	18	17	15	10	12	20
Consumer durables	22	21	28	28	34	40	40	41	26	38	42
Electrical	9	9	9	10	10	13	13	13	10	14	13
Machinery & equipment	17	17	19	20	21	21	20	23	13	34	24
Containers & packaging	—	—	—	—	—	1	—	—	—	—	—
Other	7	6	7	8	10	10	9	2	3	5	4
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	64	60	74	80	95	106	103	97	65	109	109
Exports	1	1	1	1	1	1	1	1	1	1	1
Drawn Tube Total	65	61	75	81	96	107	104	98	66	110	110
Welded Tube											
Building & construction	1	1	2	2	2	3	2	2	2	3	3
Transportation	—	—	1	1	1	3	2	1	1	1	—
Consumer durables	52	45	54	36	41	58	62	53	40	55	74
Electrical	3	3	4	4	4	5	5	6	4	5	7
Machinery & equipment	14	13	46	41	44	47	69	81	52	73	51
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	1	1	3	2	2	2	2	1	1	1	1
**Statistical adjustment	−15	−15	+4	+11	−11	−8	−28	−50	−38	−22	−15
Domestic, total	56	48	114	97	83	110	114	94	62	116	121
Exports	—	—	—	—	—		—	—	—	1	1
Welded Tube Total	56	48	114	97	83	110	114	94	62	117	122
Rod & Bar											
Building & construction	25	23	25	29	29	33	28	29	25	31	32
Transportation	40	29	31	35	40	44	35	34	28	37	41
Consumer durables	17	11	13	15	15	16	14	14	11	20	21
Electrical	88	66	92	97	93	85	67	73	55	85	86
Machinery & equipment	54	46	52	51	53	52	41	39	31	45	41
Containers & packaging	—	—	—	1	1	—	—	—	—	—	—
Other	25	24	20	26	26	31	27	25	29	42	46
**Statistical adjustment	+34	+34	+51	+109	+84	+68	—	+97	+30	+40	+40
Domestic, total	283	233	284	363	341	329	212	311	209	300	307
Exports	24	52	103	137	62	60	28	55	52	47	60
Rod & Bar Total	307	285	387	500	403	389	240	366	261	347	367

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market
1973-1983

Millions of pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Bare Wire											
Building & construction	28	19	20	24	27	26	26	25	22	41	38
Transportation	4	4	4	5	8	8	8	6	5	7	8
Consumer durables	5	4	5	5	6	6	8	10	9	13	16
Electrical	8	8	9	11	11	10	11	10	11	21	20
Machinery & equipment	16	16	22	21	28	29	24	22	14	28	24
Containers & packaging	7	6	7	6	7	8	5	5	2	4	3
Other	2	3	3	4	6	4	4	3	3	4	4
**Statistical adjustment	−18	−18	−23	−60	−25	−22	−12	−16	−18	—	—
Domestic, total	52	42	47	16	68	69	74	65	48	118	113
Exports	10	12	25	58	30	24	15	19	21	16	14
Bare Wire Total	62	54	72	74	98	93	89	84	69	134	127
ACSR & Bare Cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	324	299	311	367	387	335	295	294	399	534	487
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
**Statistical adjustment	—	—	—	+8	—	—	—	—	—	—	—
Domestic, total	324	299	311	375	387	335	295	294	399	534	487
Exports	35	46	68	25	31	55	57	28	27	9	4
ACSR & Bare Cable Total	359	345	379	400	418	390	352	322	426	543	491
Insulated or Covered Wire & Cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	332	275r	320r	359	428	419	376	304	245	446	445
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	332	275r	320r	359	428	419	376	304	245	446	445
Exports	1	1	2	4	—	1	1	—	1	—	—
Insulated Wire & Cable Total	333	276r	322r	363	428	420	377	304	246	446	445
Forgings											
Building & construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	61	53	82	79	98	85	76	57	54	77	73
Consumer durables	1	1	2	2	2	2	2	2	2	2	3
Electrical	1	1	1	1	1	1	1	1	2	3	3
Machinery & equipment	8	8	10	10	13	13	11	7	6	14	18
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	13	12	10	11	8	9	9	12	14	12	12
**Stastical adjustment	—	—	—	—	—	5	—	—	—	—	—
Domestic, total	85	76	106	104	123	116	100	80	79	109	110
Exports	3	3	3	3	4	—	6	3	4	4	5
Forgings Total	88	79	109	107	127	116	106	83	83	113	115

Product Net Shipments* by Major Market
1973-1983

Millions of pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Impacts											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	5	5	6	4	5	6	4	6	5	8	10
Consumer durables	4	4	4	3	3	1	1	1	1	3	2
Electrical	2	2	3	3	4	3	2	2	2	4	4
Machinery & equipment	8	7	10	9	11	6	5	5	3	5	4
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	9	7	7	7	8	5	3	3	3	6	7
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	28	25	30	26	31	21	15	17	14	26	27
Exports	—	—	—	—	—	—	—	—	—	—	—
Impacts Total	28	25	30	26	31	21	15	17	14	26	27
Powder & Paste											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	—	—	—	—	—	—	—	—	—	—	—
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	94	89	121	125	130	136	122	119	92	169	246
**Statistical adjustment	−10	−10	−17	−20	−15	−14	−15	−3	—	—	—
Domestic, total	84r	79	104	105	115	122	107	116	92	169	246
Exports	5	6	7	16	14	14	15	17	7	9	12
Powder & Paste Total	89	85	111	121	129	136	122	133	99	178	258

* *"Net Shipments" exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.*

** *"Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net-shipments that the Aluminum Association feels are more correct.*

r — Revised (NR) not reported by Census

(1) Includes primary and secondary ingot for castings, destructive uses and exports.

(2) Extruded rod & bar combined with rolled and continuous cast rod & bar from 1972 to present.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*
1973-1983

BUILDING & CONSTRUCTION — Millions of Pounds

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Windows, doors & screens, total	951	788r	845	851r	903r	957r	916r	817r	670r	830r	1,001
Ingot	39	30r	34r	36r	46r	41r	43r	54r	79r	108r	117
Total mill products	912	758	811	815	857	916	873	763	591	722	884
Sheet	154	108	131	118	130	157	114	117	81	108	139
Plate	1	1	1	1	1	1	1	1	—	1	—
Extruded shapes	729	625	651	665	695	725	727	618	488	580	709
Rod & Bar[1]	14	11	14	15	15	16	15	14	10	13	14
Bare wire	14	13	14	15	16	17	16	13	12	20	22
Awnings & Canopies, total	152	105	114	143	156r	177	145	137	93	152	221
Ignot	—	—	—	—	—	—	—	—	2	2	3
Total mill products	152	105	114	143	156	177	145	137	91	150	218
Sheet	130	86	93	121	131	150	122	117	73	127	186
Extruded shapes	19	16	18	19	21	23	19	16	14	18	25
Extruded pipe & tube	1	1	1	1	2	2	2	2	2	3	4
Drawn tube	1	1	1	1	1	1	1	1	1	1	1
Welded tube	1	1	1	1	1	1	1	1	1	1	2
Residential siding, total	381	262	324	376	488	494	509	521	393	531	572
Sheet	380	261	323	375	487	493	508	519	390	528	569
Extruded shapes	1	1	1	1	1	1	1	2	3	3	3
Mobile homes, total	217	164r	174r	156	209r	268r	275r	265r	197	279r	456
Ignot	5	4r	4r	3	5r	5r	5r	5r	7	11r	17
Total mill products	212	160	170	153	204	263	270	260	190	268	439
Sheet	140	106	115	102	144	192	196	197	148	213	328
Extruded shapes	72	54	55	51	60	71	74	63	42	55	111
Bridge, street & highway, total	117	95r	93	101r	128r	125r	123r	121r	107	178r	174
Ingot	15	13r	12r	12r	16r	15r	16r	16r	19	21r	22
Total mill products	102	82r	81r	89	112	110	107	105	88	157	152
Sheet	61	47	48	52	66	68	63	61	46	100	94
Foil	1	1	1	1	1	1	—	—	—	—	—
Extruded shapes	19	15	16	18	22	20	20	20	21	27	29
Extruded pipe & tube	20	18r	15r	17	22	20	23	23	19	28	28
Rod & bar[1]	1	1	1	1	1	1	1	1	2	2	1

Trends in Selected Markets*
1973-1983

TRANSPORTATION — **Millions of pounds**

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Trucks & buses, total	359	278r	310r	287	497r	449r	433r	366r	163r	359r	402
Ingot	185	151r	148r	136r	216r	199r	191r	169r	88r	160r	181
Total mill products	174	127r	162	151	281	250	242	197	75	199	221
Sheet	96	68	85	77	158	137	137	114	36	103	123
Plate	4	3	4	4	8	7	7	7	4	11	14
Rod & bar(1)	2	2	2	2	5	5	3	2	1	2	2
Extruded shapes	49	36	45	44	69	64	63	52	24	57	59
Extruded pipe & tube	1	2r	1	1	1	1	—	—	—	1	1
Drawn tube	1	1	1	1	1	1	1	1	—	—	—
Bare wire	—	—	—	—	1	1	1	—	—	1	1
Forgings	20	14	23	21	37	33	29	20	9	22	19
Impacts	1	1	1	1	1	1	1	1	1	2	2
Passenger cars, total(2)	1,225	911r	1,105r	1,046r	1,501r	1,571r	1,494r	1,272r	863r	980r	1,319
Ingot	868	662r	781r	746r	1,008r	1,003r	967r	886r	648r	719r	998
Total mill products	357	249r	324r	300r	493	568	527	386	215	261	321
Sheet	235	156	199	180	333	392	378	264	124	154	204
Plate	1	1	1	1	1	2	—	1	—	—	—
Foil	40	26	28	24	36	41	35	22	14	12	17
Rod & bar(1)	19	9	9	10	11	11	11	12	9	12	16
Extruded shapes	34	37	59	61	73	77	58	51	42	54	43
Extruded pipe & tube	13	9r	13r	9r	10	14	14	11	7	9	12
Drawn tube	3	1	4	7	12	13	13	10	6	7	15
Bare wire	1	1	1	1	1	1	1	1	1	2	2
Forgings	10	8	8	6	14	14	14	9	8	7	6
Impacts	1	1	2	1	2	3	3	5	4	4	6
Trailers & semi-trailers, total	303	182	211	243r	388r	425r	366r	280r	144r	400r	455
Ingot	22	17	20	21r	33r	33r	30r	22r	18r	35r	42
Total mill products	281	165	191	222	355	392	336	258	126	365	413
Sheet	124	62	78	88	143	165	141	104	45	150	176
Plate	7	4	7	9	14	15	11	10	6	14	18
Rod & bar(1)	1	1	1	1	2	2	2	2	2	4	5
Extruded shapes	147	96	103	122	194	208	179	140	71	192	209
Extruded pipe & tube	1	1	1	1	1	1	1	1	1	1	1
Bare wire	1	1	1	1	1	1	2	1	1	3	3
Forgings	—	—	—	—	—	—	—	—	—	1	1

r — revised

** — These "selected markets" represent either those in which The Aluminum Association has marketing programs, or which are important aluminum market categories. They only account for a portion of aluminum shipments to each major market.*

(1) Extruded rod and bar combined with rolled and continuous cast rod and bar.

(2) Shipments to "Passenger Cars" cover new domestic automobile production, spare parts, accessories and after-market parts. Shipments for light trucks and vans are included in Trucks and Buses.

NOTE: For information on years prior to 1973 see the Aluminum Statistical Review—Historical Supplement.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*

CONSUMER DURABLES — **Millions of pounds**

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Air conditioners, freezers, refrigerators, total	275	219r	290r	249r	304r	357r	301r	285r	183	301r	375
Ingot	30	25r	33r	29r	38r	39r	35r	32r	26	32r	38
Total mill products	245	194	257	220	266	318	266	253	157	269	337
Sheet	108	95	117	106	116	138	127	134	94	164	208
Foil	104	75	109	81	108	117	91	81	38	67	84
Extruded shapes	13	12	13	13	19	31	22	17	12	16	18
Extruded pipe & tube	16	11	14	12	13	13	13	11	8	12	14
Drawn tube	2	1	4	8	10	14	13	10	5	8	10
Rod & bar(1)	—	—	—	—	—	—	—	—	—	1	1
Bare wire	—	—	—	—	—	—	—	—	—	1	2
Portable appliances, total	56	44r	59r	56r	70r	76r	58r	58r	47	73r	90
Ingot	31	26r	31r	30r	41r	43r	37r	35r	27	40r	
Total mill products	25	18	28	26	29	33	21	23	20	33	40
Sheet	21	14	23	22	24	27	16	18	16	28	36
Extruded shapes	2	3	3	2	2	2	2	2	2	3	3
Drawn tube	1	1	1	1	2	3	3	3	2	2	1
Rod & bar(1)	1	—	1	1	1	1	—	—	—	—	—
Cooking utensils, total	203	136r	171r	161	152r	171r	138r	163r	135	169	190
Ingot	27	21r	26r	24	27r	28r	25r	26	24	29	32
Total mill products	176	115	145	137	125	143	113	126	111	140	158
Sheet	171	109	140	132	121	139	109	122	108	137	155
Plate	—	—	—	—	—	—	—	—	—	—	—
Extruded shapes	4	4	4	4	3	3	3	3	2	2	3
Welded tube	—	—	—	—	—	—	—	—	—	1	—
Bare wire	1	1	1	1	1	1	1	1	1	—	—
CONTAINERS & PACKAGING											
Household & institutional foil, total	283	270	287	283	290	257	259	245	232	245	224
Metal cans total mill products	3,140	2,858	2,725	2,583	2,445	2,349	2,051	1,851	1,411	1,540	1,307
Sheet	3,140	2,858	2,725	2,583	2,445	2,349	2,051	1,851	1,411	1,540	1,307
Semi-rigid food containers Total mill products	158	134	153	160	159	176	168	166	150	156	173
Sheet	21	19	38	20	22	23	15	15	9	13	14
Foil	137	115	115	140	137	153	153	151	141	143	159

r — revised

** — These "selected markets" represent either those in which The Aluminum Association has marketing programs, or which are important aluminum market categories. They only account for a portion of aluminum shipments to each major market.*

(1) Extruded rod and bar combined with rolled and continuous cast and rod bar.

(2) Shipments to "Passenger Cars" cover new domestic automobile production, spare parts, accessories and after-market parts. Shipments for light trucks and vans are included in Trucks and Buses.

NOTE: For information on years prior to 1973, see the Aluminum Statistical Review—Historical Supplement.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

U.S. Aluminum Supply

The U.S. aluminum supply increased 754 million pounds in 1983 to a total of 13,557 million pounds. This represents a 6.7 percent increase compared to the 1982 supply level. Primary production at 7,393 million pounds was 2.4 percent higher than the 7,217 million pounds produced in 1982.

Primary imports of 1,637 million pounds were 20.5 percent above the 1982 level of 1,359 million pounds. Imports of mill products increased 35.7 percent to 619 million pounds during 1983 as compared to 456 million pounds in 1982.

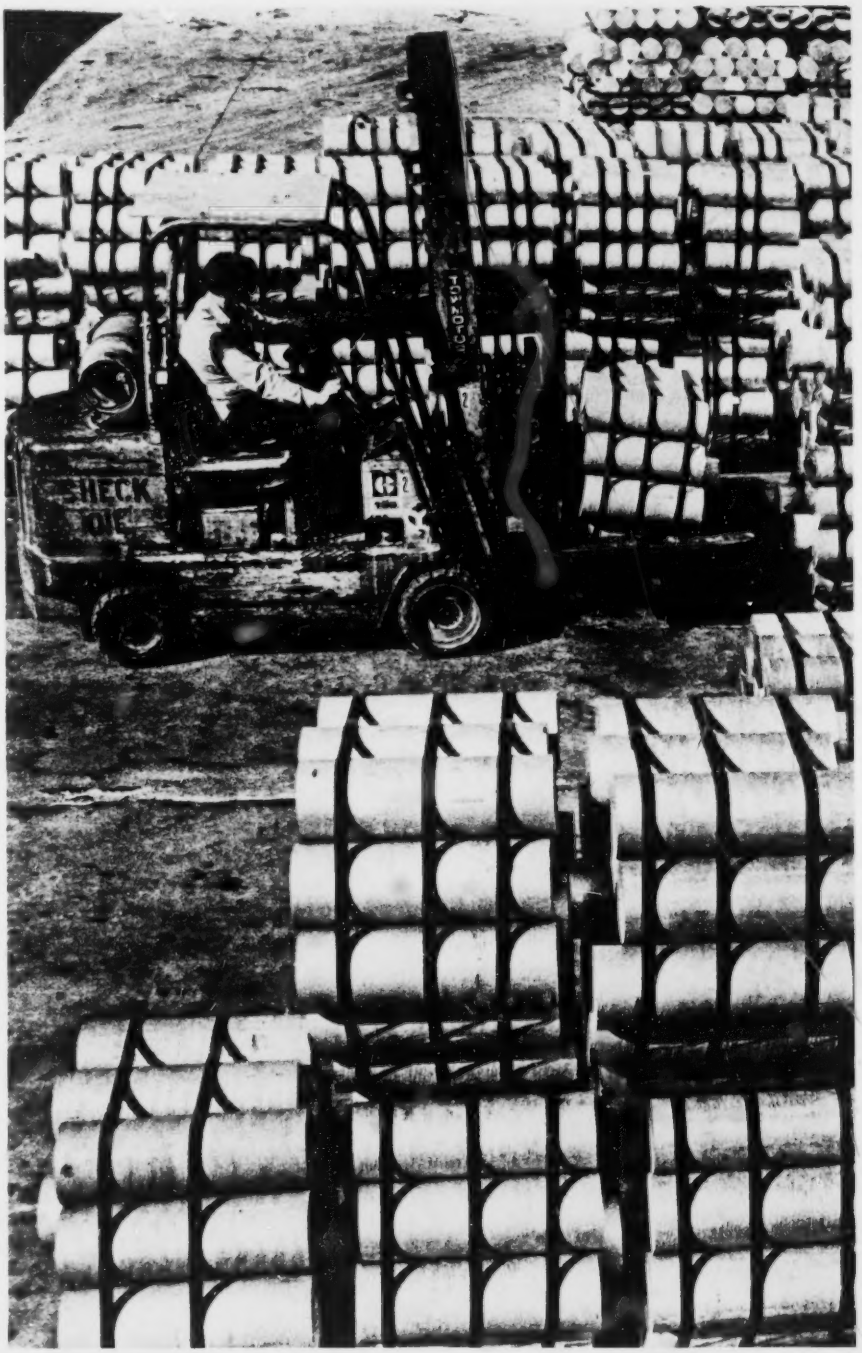
Import data for both years reflect the reimports of metal exported for processing and returned for further processing in accordance with tarrif arrangements under TSUSA 806.30 (Tarrif Schedules of the United States Annotated).

Secondary recovery (domestic and imports) was 3,908 million pounds. The graph on page 22 illustrates the relative change in the portions of total aluminum supplies from each source for the years 1973 through 1983.

The table on page 23 details the total supply of aluminum and its principal sources for the years 1942 through 1983 before any adjustments for stockpile deliveries or withdrawals. The significance of the stockpile and its effect on total supply are described on page 24.

The growth of U.S. primary aluminum production over the past decade is outlined on the graph and detailed in the table on page 25.

Installed capacity by company is presented for the years 1973 through 1983 on page 26. The 1983 year-end primary aluminum capacity in the U.S. was 5,509,000 short tons, down 0.4% from 1982.



Aluminum recovery from scrap is an important contributor to the total aluminum supply. Data showing the increase in this source of supply for the years 1946 through 1983 are presented on pages 30 and 31.

An ample supply of aluminum extrusion billets await shipment to end-use customers.

Total Supply

1983 SUPPLY UP 6.7 PERCENT

Total supply increased 6.7% to 13,557 million pounds in 1983.

Changes vs. 1982	
Primary production	+ 2.4%
Imports, Primary	+ 20.5
Imports, Mill Products	+ 35.7
Secondary Recovery	+ 6.4

Since 1973 the total supply has expanded at an average rate of 1.3 percent a year, affected mostly by two recessions in this period. In 1983 primary production represented 55 percent of total supply; imports accounted for 17 percent; and secondary recovery represented 28 percent.

In the ten years 1973-1983, secondary recovery grew at a 4.9 percent annual rate, while primary reduction had a slight decline.

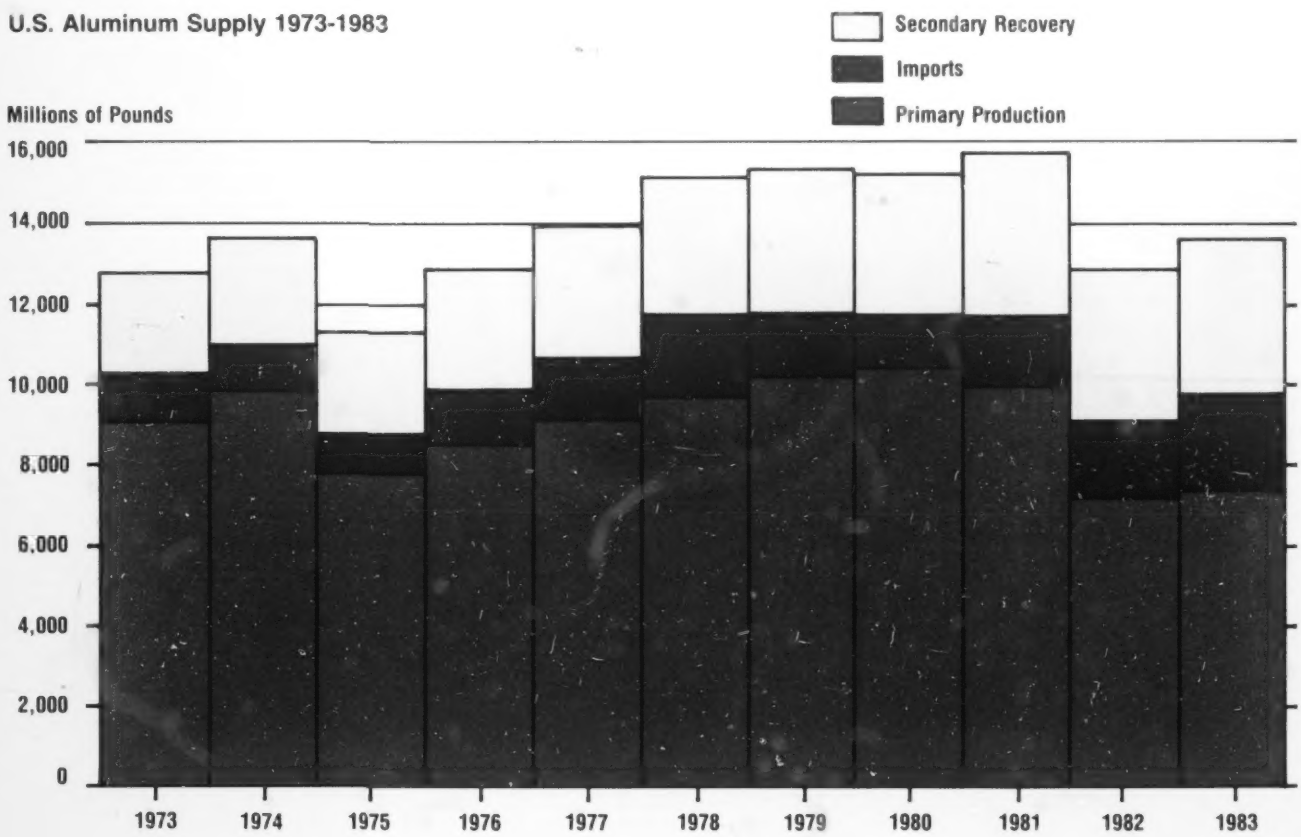
DESCRIPTION

United States supply of aluminum consists of domestic primary production, imports of primary and mill products, and metal recovered from scrap. No adjustment is made in this presentation for shipments to or withdrawals from the government stockpile. This is shown on page 24.

Detailed data on United States supply of aluminum from 1942 to 1983 are shown in the table on page 23.

For a picture of domestic primary production, see page 25. For the relationship of domestic primary production to world production, see pages 44-45. For a breakdown of imports, see pages 38-39. For further information on secondary recovery, see pages 30 and 31.

U.S. Aluminum Supply 1973-1983



Total Supply
1942-1983

Millions of Pounds

Year	Total Supply	Domestic Primary Production	Imports			Secondary Recovery		
			Total	Primary[1]	Mill Products[3]	Total	Domestic[2]	Imported Scrap[1][2]
1942	1,660	1,042	225	213	12	393	393	(a)
1943	2,739	1,840	271	271	(a)	628	628	(a)
1944	2,409	1,553	202	201	1	654	651	3
1945	2,268	990	672	665	7	606	597	9
1946	1,486	819	85	83	2	582	556	26
1947	1,893	1,144	31	31	(a)	718	690	28
1948	2,128	1,247	178	166	12	703	574	129
1949	1,812	1,207	171	155	16	434	362	72
1950	2,423	1,437	377	354	23	609	487	122
1951	2,581	1,674	286	245	41	621	585	36
1952	2,786	1,875	289	256	33	622	609	13
1953	3,957	2,504	668	602	66	785	737	48
1954	4,034	2,921	472	443	29	641	626	15
1955	4,439	3,131	441	395	46	867	828	39
1956	4,746	3,358	511	462	49	877	856	21
1957	4,703	3,295	494	451	43	914	890	24
1958	4,429	3,131	572	511	61	726	708	18
1959	5,416	3,908	590	480	110	918	898	20
1960	5,306	4,029	392	309	83	885	876	9
1961	5,295	3,807	507	398	109	981	970	11
1962	6,163	4,236	751	622	129	1,176	1,164	12
1963	6,874	4,625	924	831	93	1,325	1,308	17
1964	7,435	5,105	901	788	113	1,429	1,414	15
1965	8,414	5,509	1,198	1,055	143	1,707	1,658	49
1966	9,075	5,937	1,302	1,047	255	1,836	1,775	61
1967	9,378	6,539	1,028	899	129	1,811	1,756	55
1968	10,080	6,510	1,508	1,371	137	2,062	1,994	68
1969	11,004	7,586	1,066	937	129	2,352	2,300	52
1970	10,912	7,952	894	700	194	2,066	2,000	66
1971	11,345	7,850	1,282	1,109	173	2,213	2,100	113
1972	12,005	8,245	1,508	1,319	189	2,252	2,252	(2)
1973	12,697	9,058	1,154	1,016	138	2,485	2,485	(2)
1974	13,499	9,807	1,128	1,018	110	2,564	2,564	(2)
1975	11,229	7,758	999	868	131	2,472	2,472	(2)
1976	12,785	8,503	1,340	1,151	189	2,942	2,942	(2)
1977	13,792	9,077	1,505	1,340	165	3,210	3,210	(2)
1978	14,954	9,608	2,000	1,516	484	3,346	3,346	(2)
1979	15,168	10,046	1,568	1,142	426	3,554	3,554	(2)
1980	15,064	10,259	1,329	1,161	168	3,476	3,476	(2)
1981	15,567	9,896	1,725	1,421	304	3,946	3,946	(2)
1982	12,703r	7,217	1,814	1,359	456	3,672r	3,672r	(2)
1983	13,557	7,393	2,256	1,637	619	3,908	3,908	(2)

r — Revised *Detail may not add to totals due to rounding*

p — preliminary

(a) Less than 0.5 million pounds

(1) Some imports of "starter" metal, classified by the Bureau of The Census in 1954-1957 as scrap, have here been classified as primary metal, as estimated by the Department of Commerce.

(2) Domestic secondary data are recoverable metal content for estimated total scrap consumption, as estimated by the Bureau of Mines. Before 1972 total supply included both domestic secondary recovery and an estimated 90 percent recovery from reported scrap imports. Beginning in 1972 the Bureau of Mines required reporting of imported scrap recovery data and these data are included in the domestic secondary recovery figures beginning with that year.

(3) Starting in 1970, includes reimports of metal exported for processing and returned for further processing. (TSUSA 806.30)

SOURCE: U.S. Department of Commerce, Bureau of the Census, Department of Interior, and Bureau of Mines.

U.S. Suppliers' Inventories

INVENTORIES DECLINE

The Bureau of the Census began reporting U.S. Suppliers' aluminum inventory in 1968. The figures include all forms of scrap, ingot, metal in process and finished products. During 1983 inventories decreased by 1,190 million pounds to a year-end inventory of 5,009 million pounds.

U.S. Suppliers' Inventories 1973-1983

Millions of pounds at end of year

	Type of Supplier			
Year*	Total	Integrated	Non Integrated	Secondary Smelter
1973	4,366	3,608	607	151
1974	5,156	4,202	753	201
1975	5,999	5,199	598	202
1976	5,701	4,781	687	234
1977	5,706	4,778	687	241
1978	5,494	4,460	776	258
1979	5,125	4,124	768	233
1980	5,076	4,018	797	261
1981	6,607	5,524	798	266
1982	6,199	5,224	759	216
1983	5,009	3,979	868	163

Detail may not add due to rounding.

** Prior to 1973, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCE: U.S. Department of Commerce, Bureau of the Census Current Industrial Report M33-2.

Total Supply Adjusted for Stockpile

The United States Government's aluminum stockpile, following World War II, was formed to provide the nation with a supply of aluminum for mobilization purposes. Since 1963, as a result of an agreement between major domestic aluminum producers, other interested aluminum enterprises and the U.S. Government, a program of orderly disposal of the stockpile ensued. By the end of 1976, the stockpile was essentially depleted. The data in the table represent the best figures available from different sources. Total supply, unadjusted for stockpile changes is on page 23.

Total Supply Adjusted for Stockpile 1973-1983

Millions of pounds

Year*	Total supply adjusted for stockpile	Total supply, all sources	Shipments from stockpile	Shipments to stockpile
1973	14,158	12,697	1,461	—
1974	14,520	13,499	1,021	—
1975	11,234	11,229	5	—
1976	12,803	12,785	18	—
1977	13,792	13,792	—	—
1978	14,954	14,954	—	—
1979	15,168	15,168	—	—
1980	15,064	15,064	—	—
1981	15,567	15,567	—	—
1982	12,703r	12,703r	—	—
1983	13,557	13,557	—	—

(a) Less than 0.5 million pounds.

** Prior to 1973, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCES: General Services Administration; U.S. Department of Commerce; Industry Sources.

Production of Primary Aluminum

PRODUCTION UP 2.4 PERCENT

Primary aluminum production totaled 7,393 million pounds in 1983 vs. the production of 7,217 million pounds in 1982. In the decade 1973-1983 the average annual rate of change was −0.8 percent.

DESCRIPTION:

In the United States, primary production of aluminum was begun in 1888 by the Pittsburgh Reduction Company. Data on aluminum production started in 1893, covering the industry from its very early period.

Data for 1973-1983 are presented here for your review. Data prior to 1973 may be obtained from the Aluminum Statistical Review—Historical Supplement.

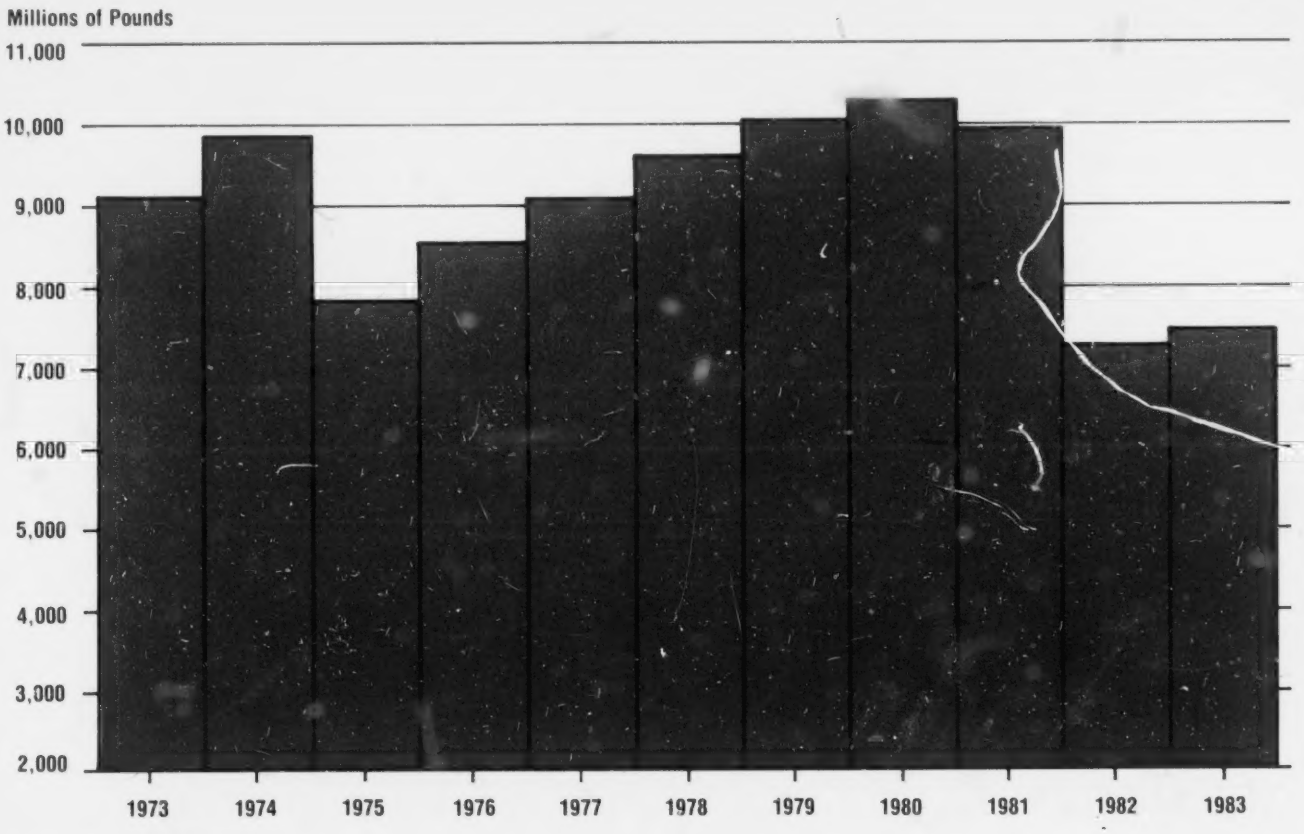
Production of Primary Aluminum in U.S.A. 1973-1983

Year*	Millions of pounds
1973	9,058.2
1974	9,806.9
1975	7,758.3
1976	8,502.8
1977	9,077.4
1978	9,607.6
1979	10,046.2
1980	10,259.4
1981	9,895.9
1982	7,217.3
1983	7,392.6

* *Prior to 1973, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCES: U.S. Department of the Interior, Bureau of Mines and the Aluminum Association, Inc.

U.S. Primary Aluminum Production 1973-1983



SOURCE: the Aluminum Association

U.S. Primary Aluminum Capacity

CAPACITY DOWN 0.4 PERCENT

Total annual primary aluminum capacity as of December 31, 1983 was 5,509,000 tons. Increases of 12.8 thousand short tons by Alumax, National Aluminum and Southwire were offset by a decrease of 36 thousand short tons by Consolidated Aluminum.

The percentage distribution of U.S. primary capacity by company at year-end 1983 was: Alcoa 28.6; Reynolds 17.7; Kaiser 13.1; Alumax 11.9; ARCO 6.5; Consolidated 5.9; Martiin Marietta Aluminum 5.0; Noranda 4.1; Revere 3.7; National Aluminum 1.7; and Southwire 1.7.

DESCRIPTION:

There were eleven domestic primary producing companies as of December 31, 1983. They are Aluminum Company of America, Alumax, Inc. ARCO Metals Company, Consolidated Aluminum Corporation (including 66% interest in Ormet), Kaiser Aluminum & Chemical Corporation, Martin Marietta Aluminum Incorporated, National Aluminum Company (50% interest in National-Southwire), Noranda Aluminum Incorporated, Revere Copper and Brass Incorporated (including 34% interest in Ormet), Reynolds Metals Company and Southwire Company (50% interest in National-Southwire).

U.S. Primary Aluminum Capacity[1]

Thousands of Short Tons

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Alcoa	1,576.0	1,576.0	1,725.0	1,725.0	1,700.0	1,700.0	1,675.0	1,675.0	1,575.0	1,575.0	1,570.0
Reynolds	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0
Kaiser	724.0	724.0	724.0	724.0	724.0	724.0	724.0	724.0	724.0	724.0	710.0
Alumax	656.0	425.0	415.7	415.7	218.7	218.0	218.7	218.7	219.0	130.5	130.5
ARCO Aluminum[3]	360.0	360.0	360.0	360.0	360.0	300.0	300.0	300.0	300.0	300.0	300.0
Colsolidated[2]	324.2	360.2	352.0	352.0	352.0	352.0	352.0	352.0	352.0	342.0	177.0
Martin Marietta	275.0	275.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	205.0	201.0
Howmet[4]	—	228.2	218.7	218.7	218.7	218.7	218.7	218.7	217.5	217.5	217.5
Noranda	225.0	225.0	140.0	140.0	140.0	140.0	140.0	140.0	70.0	70.0	70.0
Revere	203.8	203.8	203.2	203.2	203.2	203.2	200.0	199.5	199.0	197.0	197.0
National Aluminum	95.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Southwire	95.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Olin[2]	—	—	—	—	—	—	—	—	—	—	165.0
Total	5,509.0	5,532.2	5,503.6	5,503.6	5,281.6	5,224.4	5,193.4	5,192.9	5,021.5	4,916.0	4,893.0

(1) Capacities shown are as reported for December 31. They include nominal ownership of plants owned by more than one company.

(2) Consolidated acquired the aluminum business of Olin Corporation in 1974.

(3) Formally the Anaconda Company (Aluminum Division).

(4) Alumax acquired Howmet in 1983.

NOTE: Prior to 1973, consult the Aluminum Statistical Review—Historical Supplement.

SOURCE: The Aluminum Association, Inc.

Number of Plants in the U.S.

Number of Plants in the U.S.

SELECTED YEARS

PRODUCT	1982	1977	1967
Primary Ingot	32	32	24
Secondary Ingot	76	89	89
Sheet and Plate	68	49	57
Foil	27	27	26
Rod & Bar, Rolled and Continuous Cast	22	31	21
Wire, Bare, Conductor & Nonconductor	69	125	67
ACSR and Aluminum Cable, Bare	16	59	36
Wire & Cable, Insulated or Covered	43	90	61
Extruded Products	226	222	177
Drawn Tube	19	22	24
Welded Tube	18	32	21
Powder	17	18	19
Forgings	44	74	52
Impacts	16	29	na

na — Not available

SOURCE: 1967 & 1977 U.S. Department of Commerce
1982: The Aluminum Association

The latest data presented here are based on a survey conducted by the Aluminum Association. Previous years are based on unofficial directories prepared by the U.S. Department of Commerce, Bureau of Industrial Economics.

The figures shown for each product for selected years represent number of plants—not companies, which in many instances operate more than one plant. No totals are shown since some plants produce more than one product. Data include captive plants (plants producing only for company's own use).

Five outline maps of the United States indicating the geographic distribution of aluminum plants by various product groups are presented on pages 27-29.

For a detailed listing, contact the Aluminum Association for a copy of the U.S. Aluminum Industry Plant Directory (October, 1982).

★ *Primary*
■ *Secondary*

U.S. Plants — cont.

● *Foil*
★ *Sheet and Plate*

● *Bare Wire*
★ *Rolled and Continuous Cast Rod and Bar*
■ *ACSR and Cable and or Insulated or Covered Wire and Cable*

★ Extrusions

■ Forgings and or Impacts
● Powder and Paste
★ Drawn and or Welded Tube

Aluminum Scrap Consumption and Recovery

SCRAP CONSUMPTION UP 6.3 PERCENT

Total domestic industry scrap consumption on a gross weight basis, increased 6.3% in 1983 to 2,226,000 tons from the 1982 volume of 2,095,000 tons.

Secondary recovery totaled 1,954,000 tons with new scrap accounting for 54 percent and old scrap for 46 percent.

Old scrap recovery at 904,000 tons was up 4.9 percent from 1982. Reclamation from aluminum cans reached 572,000 tons, up 1.8 percent over 1982 accounting for of can shipments.

DESCRIPTION:

Recovery of aluminum from scrap, an important source of supply, is shown on pages 30 and 31. Two sets of scrap data are tabulated. The scrap consumption figures are on a gross weight basis as reported by plants consuming scrap. The aluminum recovery figures are on a recovered metal basis, that is the content of aluminum base alloy recovered from gross weight consumed. The figures in this table are consistent with domestic secondary recovery on page 25.

The aluminum recovery data are shown by source, that is by new and old scrap. New scrap, generated by plants making end products, and old scrap recovered from metal that has been used by consumers, are returned to plants making ingot and mill products and thus add to the total metal supply.

Through 1954, data on scrap consumption and recovery are based on complete reporting. Beginning in 1955, reported figures are expanded to industry totals by the Bureau of Mines to allow for a number of firms who do not report. In 1961, sweated pig consumption data were improved and included in old scrap.

Recovery of new scrap and old scrap over the past ten years has been about 24 percent of total supply (28.3 percent in 1983). However, this figure does not include "run-around" scrap consumed by the generating companies.

Heaped high, these aluminum beverage cans will be recycled at a savings of 95 percent of the energy needed to make aluminum from bauxite. Consumers returned more than 1.1 billion pounds of aluminum cans in 1983.

Aluminum Can Reclamation Data 1973-1983

Year	Pounds of Aluminum Collected (millions)	No. of Aluminum Cans Collected (billions)[3]	Percent of Aluminum Cans Collected[4]
1973	68[1]	1.5	15.2
1974	103[1]	2.3	17.5
1975	180[2]	4.1	26.9
1976	212[2]	4.9	24.9
1977	280[2]	6.6	26.4
1978	340[2]	8.0	27.4
1979	360[2]	8.5	25.7
1980	609[2]	14.8	37.3
1981	1,017[2]	24.9	53.2
1982	1,124[2]	28.3	55.5
1983	1,144[2]	29.4	52.9

(1) Represents total industry; includes additional 1, 5, and 18 million pounds in the years 1972, 1973 and 1974 respectively which accounts for all-aluminum cans collected by non-members of the Aluminum Association.

(2) SOURCE: Net receipts—U.S. Department of the Interior, Bureau of Mines.

(3) Calculation based on an Association can weight survey.

(4) Based on Can Manufacturers Institute aluminum beverage can shipments data lagged one quarter.

Aluminum Scrap Consumption and Recovery 1946-1983

Short Tons

SCRAP CONSUMPTION		SCRAP CONSUMPTION (Gross Weight Basis) As Reported[6]				RECOVERY[5] (Recovered Metal Basis)		
Year	Total Industry[1]	Total	Secondary Smelters	Primary Producers[2][3]	Others[4]	Total Industry[1]	From New Scrap	From Old Scrap
1946	344,000	344,000	238,000	100,000	6,000	278,073	187,538	90,535
1947	411,070	411,070	312,087	90,009	8,974	344,837	180,990	163,847
1948	324,495	324,495	217,666	100,454	6,375	286,777	191,129	95,648
1949	199,039	199,039	128,472	65,602	4,965	180,762	136,166	44,596
1950	273,192	273,192	192,047	68,316	12,829	243,666	167,308	76,358
1951	332,296	332,296	232,339	80,463	19,494	292,608	216,017	76,591
1952	347,730	347,730	255,083	77,939	14,708	304,522	233,258	71,264
1953	413,333	413,333	276,279	116,011	21,043	368,566	289,626	78,940
1954	350,515	350,515	239,069	91,446	20,000	313,047	246,609	66,438
1955	490,000	427,045	313,879	86,739	26,427	414,000	314,500	99,500
1956	517,000	439,343	331,811	88,754	18,778	428,000	331,000	97,000
1957	532,000	463,000	345,000	94,000	24,000	445,000	347,500	97,500
1958	430,000	375,564	275,762	77,282	22,520	354,000	274,500	79,500
1959	539,000	475,964	384,506	62,917	28,541	449,000	345,000	104,000
1960	523,000	441,479	353,889	54,366	33,224	438,000	343,000	95,000
1961	579,000	498,116	331,705	44,572	121,839	485,000	329,500	155,500
1962	700,000	594,873	442,168	36,520	116,185	582,000	415,500	166,500
1963	780,000	647,489	493,168	44,885	109,436	654,000	495,000	159,000
1964	850,000	712,251	538,992	58,928	114,331	707,000	545,000	162,000
1965	970,000	816,620	579,844	94,985	141,791	829,000	624,000	205,000
1966	1,080,000	896,334	[illegible]	125,487	132,090	887,500	700,250	187,250
1967	1,060,000	882,795	617,1[illegible]	122,987	142,663	878,000	703,500	174,500
1968	1,218,000	1,015,070	699,289	152,176	163,605	997,000	816,000	181,000
1969	1,331,000	1,109,097	742,118	196,857	170,122	1,150,000	950,000	200,000
1970	1,167,000	972,533	650,327	153,247	168,959	1,000,000	803,000	197,000
1971	1,210,000	1,004,778	639,909	170,755	194,114	1,050,000	834,000	216,000
1972	1,342,000	1,152,433	706,484	205,231	240,718	1,126,000	876,000	250,000
1973	1,481,000	1,262,439	736,819	212,545	313,075	1,242,000	977,000	265,000
1974	1,448,000	1,206,061	630,223	238,958	336,880	1,282,000	978,000	304,000
1975	1,454,000	1,232,155	611,540	342,810	277,805	1,236,000	899,000	337,000
1976	1,741,000	1,465,462	758,992	365,190	341,280	1,471,000	1,062,000	409,000
1977	1,854,000	1,568,215	841,258	425,733	301,224	1,605,000	1,074,000	531,000
1978	1,911,000	1,616,514	882,697	437,360	296,457	1,673,000	1,098,000	575,000
1979	2,020,000	1,705,031	922,159	442,262	340,610	1,777,000	1,163,000	614,000
1980	1,982,000	1,693,633	884,255	541,771	267,607	1,738,000	1,058,000	680,000
1981	2,239,000	2,239,000	1,142,000	731,000	366,000	1,973,000	1,137,000	836,000
1982	2,095,000r	2,095,000r	970,000r	742,000	383,000	1,836,000r	974,000r	862,000r
1983p	2,226,000	2,226,000	988,386	853,133	384,481	1,954,000	1,050,000	904,000

r — revised
p — preliminary
(1) As reported. 1946-54, estimates expanded from reported figures, 1955-82.
(2) For 1951-53 includes small amounts reported consumed by non-integrated fabricators.
(3) Represents 100 per cent scrap consumption coverage by primary producers.
(4) Most consumption of sweated pig apparently not reported by "others" prior to 1961.
(5) Recovery from sweated pig included in new scrap 1946-60, old scrap 1961-83.
(6) Figures 1981 to present represent estimated full coverage.

SOURCE: U.S. Department of the Interior, Bureau of Mines and U.S. Depatment of Commerce, Bureau of Industrial Economics.

U.S. Aluminum Foreign Trade Statistics

IMPORTS ACCOUNT FOR 16.8 PERCENT OF U.S. SUPPLY

For the year 1983 imports of aluminum ingot and mill products accounted for 16.8 percent of total aluminum supply in the United States. Exports comprised 8.5 percent of total industry shipments. These facts illustrate the major role of foreign trade in the U.S. aluminum industry.

During 1983 imports of aluminum ingot rose 20.5 percent to 1,637 million pounds as compared with 1,359 million pounds in 1982. Imports of semifabricated products increased 35.7% to 618 million pounds.

Exports of aluminum ingot decreased in 1983 to 795 million pounds, a 0.9% drop over the 1982 level of 802 million pounds. Exports of semifabricated products declined, to 446 million pounds, 9.5 percent below 1982.

Exports of aluminum scrap showed a 35% increase to a 579 million pound level.

In 1983 the U.S. was again a net importer of aluminum by an amount of 646 million pounds.

The product composition of United States imports and exports for the years 1973-1983 is graphically presented on pages 34 and 35. The data for total imports and exports as well as the detail of semifabricated aluminum product imports and exports for 1983 and the preceding 10 years are tabulated on pages 36 and 37. The total imports include dross and skimmings and the gross weight of scrap. In the table on United States Supply (page 23) dross and skimmings are excluded, and the recovered weight of imported scrap is used. It is counted as part of domestic secondary recovery for the years 1972-1983 and shown as a separate supply component for years prior to 1972.

The detail of 1983 aluminum imports by product and country of origin is presented on pages 38 and 39. Similarly, the exports on a product basis by country of destination are detailed on pages 40 and 41.

For information on years prior to 1973, see the Aluminum Statistical Review-Historical Supplement.

This aluminum drill pipe will be used for directional drilling from a platform in the North Sea.

U.S. Imports

IMPORTS UP 25.4 PERCENT

Aluminum imports totaled 2,465 million pounds during 1983, up 25.4 percent from 1982. Ingot, which accounted for 66.4 percent of all aluminum imported during 1983 increased 20.5 percent to 1,637 million pounds. Semifabricated aluminum products increased 35.7 percent to 618 million pounds. Sheet imports at 493 million pounds were up 28.4 percent with Japan being the largest source at 46.5% of the total. Scrap imports increased 37.5 percent to 209 million pounds.

In 1983 the U.S. imported aluminum from 60 different countries.

The largest single source was Canada at 1,483 million pounds or 60.2 percent of the total aluminum imported. Imports from Japan were 235 million pounds (9.5%) and from Venezuela 129 million pounds (5.2%).

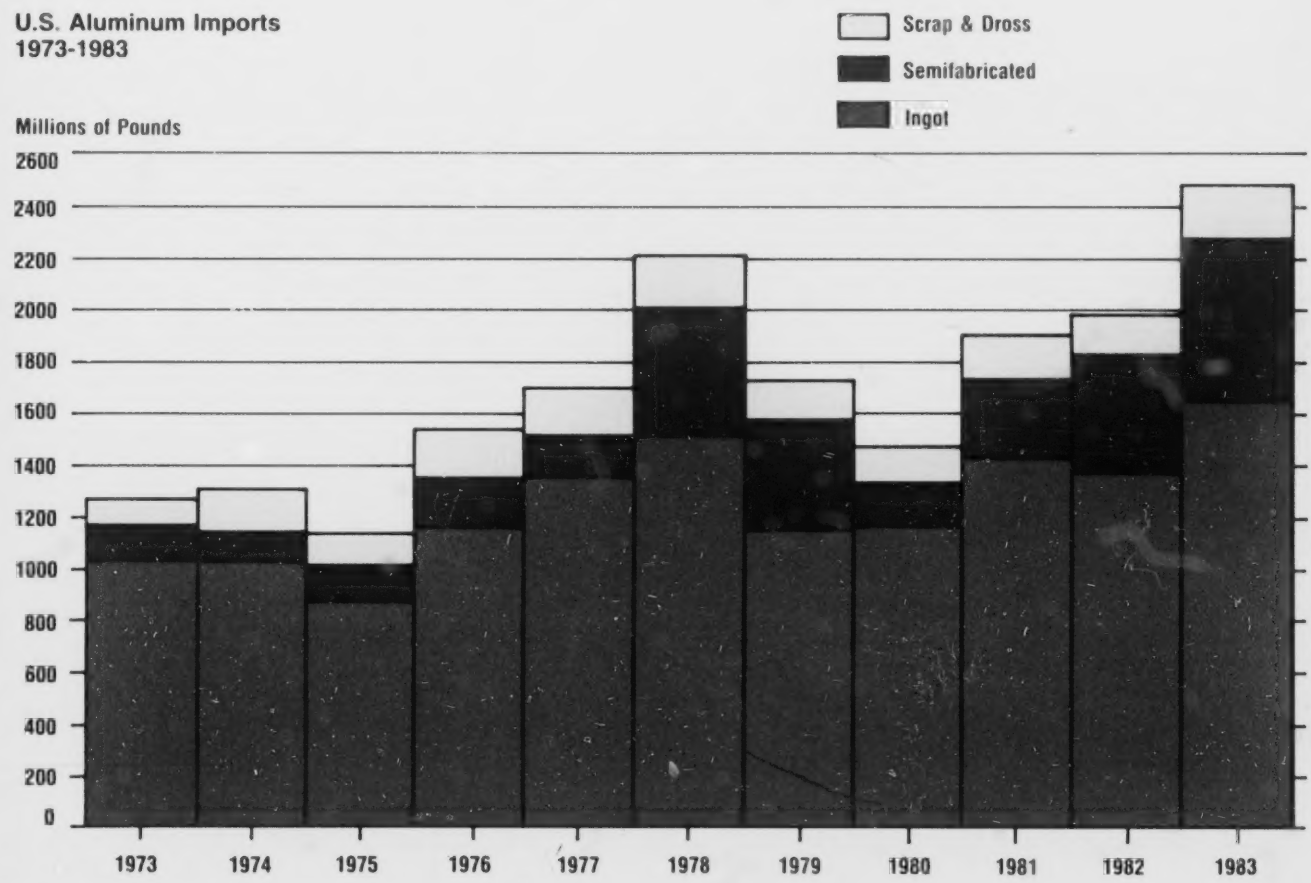
DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum imports in the years 1973-1983. In addition to showing the imports of ingot, scrap, and dross and skimmings, the upper half of the table on pages 36 and 37 shows in detail the categories of imports of semifabricated products for the years 1973-1983. Imports of aluminum by country for the year 1983 are shown on pages 38 and 39.

Backed foil imports and exports have been removed from the foreign trade statistics since 1978. Data for prior years have been revised to agree with the new definition.

The import data for 1981-1983 include reimports of metal exported for processing and returned for further processing under the TSUSA 806.30 tariff rule. While these data are comparable with the years 1970-1980, they are not strictly comparable to years prior to 1970 because of the nonavailability of these statistics for those years. Data on reimports are shown on pages 38 and 39.

U.S. Aluminum Imports 1973-1983



Source: the Aluminum Association

U.S. Exports

U.S. EXPORTS UP 5.6 PERCENT

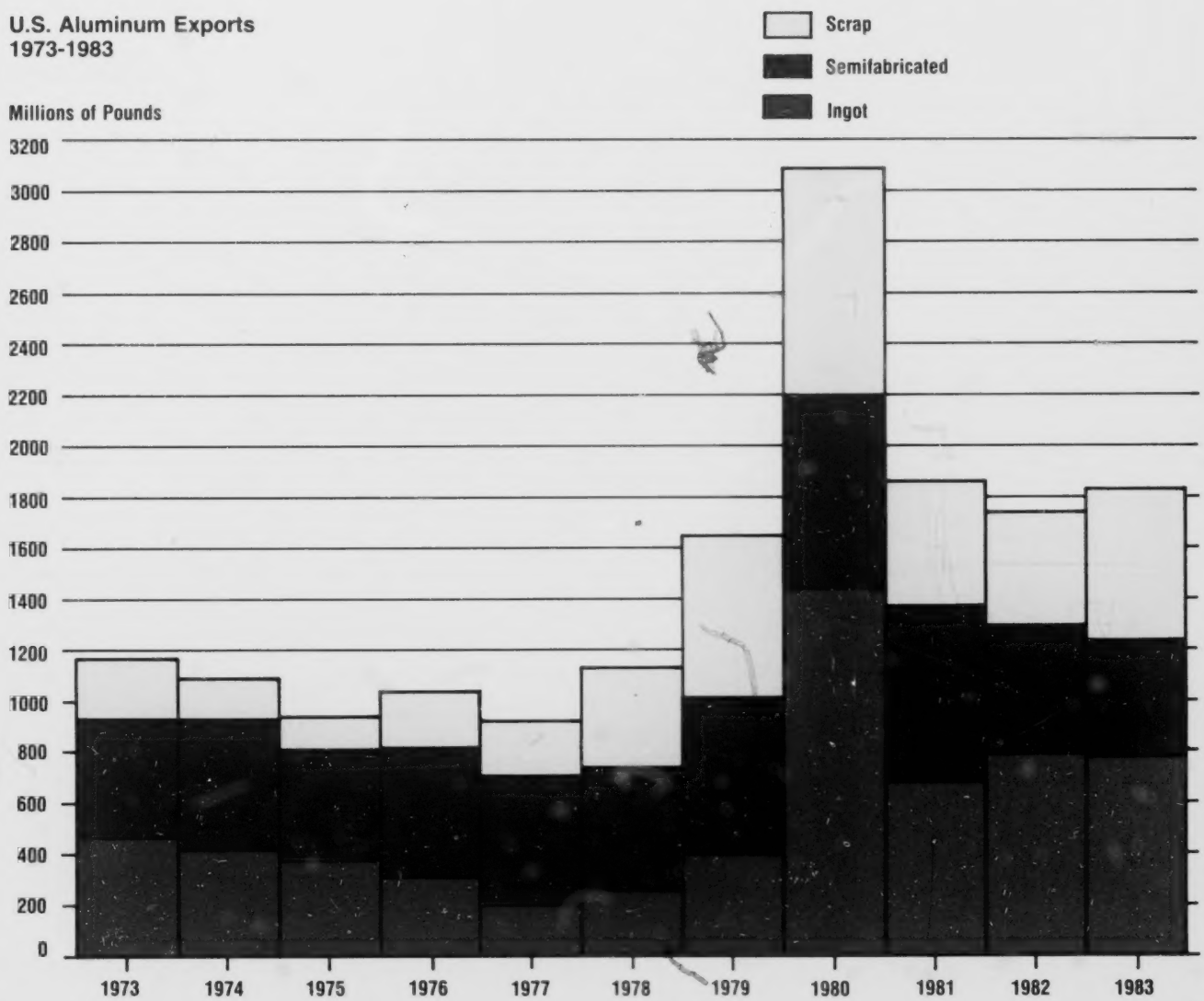
Total aluminum exports during 1983 were 1,819 million pounds, up 5.6 percent from 1982. Ingot exports fell 0.9 percent to 795 million pounds from a 1982 level of 802 million pounds. Semifabricated exports declined 9.5% from 492 million pounds in 1982 to 446 million pounds in 1983. Exports of scrap rose sharply from 429 million pounds in 1982 to 579 million pounds in 1983, about 36.0%.

Of the 112 countries receiving aluminum from the U.S., Japan received 56.8 percent or 1,035 million pounds (558 ingot, 446 scrap and 10 semifabricated). Exports to Canada were 311 million pounds of which 225 million pounds were semifabricated products and exports to China were 123 million pounds, all in aluminum ingot.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum exports in the years 1973-1983. In addition to showing the exports of ingot and scrap, the lower portion of the table on pages 36 and 37 shows the detail of exports of semifabricated products for the years 1973-1983. Exports of aluminum by country for 1983 ar shown on pages 40 and 41.

U.S. Aluminum Exports
1973-1983



Source: the Aluminum Association

United States Imports and Exports

United States Imports and Exports 1973-1983

Thousands of pounds

PRODUCT	1983	1982	1981	1980	1979
Total Imports	2,465,217	1,966,647	1,894,847	1,453,529	1,714,794
TOTAL INGOT & SEMIFABRICATED	2,255,700	1,814,325	1,725,220	1,329,404	1,567,857
INGOT	1,637,353	1,358,751	1,421,311	1,161,328	1,141,517
SEMIFABRICATED, TOTAL	618,347	455,574	303,909	168,076	426,339
Sheet & plate, Total	536,059	414,819	247,139	126,117	357,285
Circles & disks	19,131	16,404	11,673	7,757	21,529
Other	516,929	398,415	235,466	118,360	355,756
Foil, Total	29,238	19,328	13,430	9,099	17,925
Over .00035"	12,345	8,749	4,791	3,532	6,020
Not over .00035"	15,226	8,708	6,608	4,116	10,036
Capacitor	1,666	1,870	2,031	1,452	1,870
Rod & bar	27,435	10,057	34,238	16,343	37,959
Wire	6,444	3,202	3,220	2,256	6,902
Cable	2,021	101	8	144	146
Angles, shapes, etc.	3,478	1,272	1,320	1,206	1,664
Pipe & tube	3,170	1,279	1,167	682	1,098
Powder & paste	10,503	5,515	3,388	12,228	3,361
SCRAP	195,049	148,675	163,988	119,603	136,632
DROSS & SKIMMINGS	14,469	3,647	5,639	4,522	10,305
Total Exports	1,819,397	1,723,285	1,852,324	3,082,645	1,637,086
TOTAL INGOT & SEMIFABRICATED	1,240,875	1,294,687	1,370,001	2,193,283	1,022,924
INGOT	795,216	802,348	688,321	1,429,813	401,300
SEMIFABRICATED, TOTAL	445,659	492,339	681,680	763,470	621,625
Sheet & plate	318,667	323,074	411,385	425,792	404,509
Foil	10,952	12,933	21,338	37,911	20,566
Rod & bar	24,374	51,980	102,463	136,736	61,510
Wire, bare	9,972	11,791	24,653	57,737	30,129
Other conductor	35,845	46,953	70,324	29,031	30,600
Angles, shapes, etc.	10,310	9,298	8,507	25,528	22,402
Pipe & tube, Total	9,480	13,157	15,216	16,500	16,178
Electric conduit	1,730	3,218	3,137	1,569	1,901
Other	7,751	9,939	12,079	14,931	14,277
Powder	5,075	6,082	6,769	16,047	14,356
Castings	18,199	14,359	17,860	14,952	17,840
Forgings	2,785	2,711	3,165	3,195	3,526
SCRAP	578,522	428,598	482,323	889,363	614,162
Net Imports*	645,820	243,362	42,523	1,629,116	77,708

Detail may not add to totals due to rounding.
** Imports less exports*

NOTE: Prior to 1973, consult the Aluminum Statistical Review—Historical Supplement.

SOURCE: U.S. Department of Commerce, Bureau of The Census.

1978	1977	1976	1975	1974	1973
2,194,902	1,688,604	1,524,971	1,120,267	1,287,966	1,256,267
2,000,058	1,505,431	1,339,742	998,468	1,127,430	1,154,272
1,515,576	1,340,658	1,150,741	868,281	1,017,722	1,016,068
484,482	164,773	189,001	130,187	109,708	138,204
433,684	128,675	150,543	107,087	69,690	99,460
20,473	15,363	16,949	10,492	11,634	15,503
413,211	113,312	133,594	96,595	58,056	83,957
21,451	9,763	10,993	4,465	13,637	18,366
7,489	3,679	4,593	2,301	8,931	9,351
12,626	5,141	5,253	1,551	3,358	8,115
1,336	943	1,147	615	1,348	900
22,133	18,146	20,907	12,718	18,813	13,240
3,840	3,526	4,072	2,590	3,355	2,548
77	438	507	917	1,519	676
1,793	2,082	490	932	647	569
868	731	919	842	1,193	2,909
637	1,415	570	637	854	436
[illegible]	179,789	171,427	109,613	149,486	93,616
10,539	[illegible]	13,802	12,186	11,050	8,379
1,136,424	915,508	1,038,439	938,770	1,087,467	1,155,316
747,409	712,182	820,522	804,968	927,150	925,157
253,234	195,542	304,732	371,770	415,668	459,156
494,174	516,640	515,790	433,268	511,482	466,001
291,764	344,309	343,014	276,321	366,910	327,871
11,902	13,062	14,252	10,375	16,865	8,109
59,672	27,433	54,913	51,577	46,617	59,855
23,906	15,240	18,364	21,481	16,008	14,179
56,121	58,137	27,630	27,350	8,541	4,209
17,110	8,494	9,761	14,120	18,533	17,019
19,115	21,370	19,755	15,107	17,410	12,297
3,493	7,230	4,577	3,266	2,245	2,346
15,622	14,140	15,178	11,841	15,165	9,951
14,584	14,804	16,879	6,920	8,733	11,908
na	8,146	7,759	5,774	7,513	5,656
na	5,643	3,463	4,243	4,352	4,899
389,015	203,326	217,917	133,802	160,317	230,159
1,058,478	773,096	486,532	181,497	200,499	100,951

United States Imports by Product and Country

United States Imports by Product and Country, 1983

Thousands of Pounds

	Total	Ingot	Scrap, Dross, and Skimmings	Semi-fabricated Products	Sheet	Plate
TOTAL ALL COUNTRIES	2,465,218	1,637,353	209,517	618,348	492,704	24,225
AFRICA	116,924	116,924	—	—	—	—
Egypt	5,931	5,931	—	—	—	—
Ghana	87,630	87,630	—	—	—	—
South Africa	23,363	23,363	—	—	—	—
NORTH AMERICA	1,483,093	1,221,393	160,936	100,763	74,706	11,666
Canada	1,483,093	1,221,393	160,936	100,763	74,706	11,666
LATIN AMERICA	190,283	140,282	19,789	30,212	8,029	2,219
Argentina	14,773	4,220	—	10,553	6,718	2,151
Brazil	29,245	25,983	—	3,262	508	—
Chile	670	662	—	7	—	—
Mexico	11,522	1,099	9,202	1,220	235	—
Panama	2,278	45	2,233	0	—	—
Venezuela	128,761	108,236	5,727	14,797	304	68
Other	3,036	38	2,626	372	264	—
ASIA	267,496	23,090	1,324	243,082	233,295	134
Hong Kong	3,960	—	321	3,639	*	1
Israel	5,974	835	863	4,276	4,028	—
Japan	234,828	367	105	234,356	229,076	133
Saudi Arabia	714	714	—	—	—	—
U. Arab Emirates	20,847	20,726	—	120	—	—
Other	1,173	448	35	690	191	—
EUROPE	351,495	124,347	27,375	199,773	134,666	10,193
Belgium	45,659	1,674	3,137	40,848	32,927	78
France	40,837	7,415	410	33,012	21,634	5,033
Germany, Fed Rep	58,178	19,478	1,192	37,508	22,216	560
Greece	3,487	—	—	3,487	778	—
Italy	39,374	24,985	1,868	12,521	6,467	397
Netherlands	13,220	1,631	1,405	10,183	10,006	—
Norway	25,560	215	935	24,409	23,969	—
Spain	4,628	3,718	206	705	343	—
Sweden	3,517	1	—	3,516	2,413	—
Switzerland	7,803	1,912	—	5,891	1,205	2,342
United Kingdom	79,942	53,906	18,166	7,870	1,479	1,535
Yugoslavia	27,284	8,874	22	18,388	10,937	—
Other	2,006	538	33	1,434	291	249
OCEANA	35,459	—	93	35,366	35,120	14
Australia	35,144	—	—	35,144	35,119	14
Other	316	—	93	223	*	—
TOTAL WESTERN WORLD	2,444,750	1,626,037	209,517	609,195	485,817	24,225
OTHER	20,468	11,315	—	9,152	6,887	—
Hungary	9,079	—	—	9,079	6,820	—
Romania	11,101	11,035	—	65	65	—
U.S.S.R.	280	280	—	—	—	—
Other	8	—	—	8	2	—

Details may not add to totals because of rounding.
**Less than 500 pounds*
SOURCE: U.S. Department of Commerce, Bureau of The Census.
NOTE: Reimports are metal exported for processing and returned for further processing (TSUSA 806.30)

Circle & Discs	Capacitor Foil	Foil, not Over 0.00035"	Foil over 0.00035"	Rod and Bar	Wire	Cable	Angles, Shapes, and Sections	Pipes and Tubes and Fittings	Powder and Paste
19,131	1,666	15,226	12,345	27,435	6,444	2,021	3,478	3,170	10,503
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
88	—	4,988	413	961	2,179	1,241	1,634	1,071	1,815
88	—	4,988	413	961	2,179	1,241	1,634	1,071	1,815
454	—	418	160	15,382	1,381	600	367	45	1,555
198	—	—	19	1,341	125	—	—	—	—
42	—	418	62	1,041	46	—	—	—	1,144
—	—	—	—	—	—	—	—	—	7
214	—	—	—	94	—	600	74	*	3
—	—	—	—	—	—	—	—	—	—
—	—	—	*	12,906	1,210	—	264	45	—
—	—	—	79	—	—	—	29	—	—
5,770	219	49	355	390	442	172	907	1,191	156
3,635	—	—	—	1	1	—	—	—	—
—	—	—	—	—	—	—	74	174	—
1,784	219	41	342	389	439	171	720	974	66
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	111	9	—
351	—	8	13	—	2	1	1	34	90
12,818	1,445	9,771	9,360	10,695	2,221	5	571	861	7,167
5,828	1	20	95	1,748	114	—	22	—	15
2,604	481	993	836	276	206	—	7	71	870
11	177	6,566	5,333	245	190	3	85	142	1,980
564	—	—	2,135	—	—	—	—	10	—
2,601	742	—	257	1,853	84	*	*	7	112
—	43	32	4	47	0	—	5	34	13
300	—	*	*	43	16	—	*	81	—
293	—	—	6	—	15	—	—	13	35
—	—	—	14	*	11	*	309	2	767
4	—	2,000	187	4	—	—	136	11	2
530	—	*	140	539	268	1	1	368	3,009
82	—	—	—	5,940	1,312	—	5	111	—
—	1	160	354	*	4	*	*	11	365
—	—	—	9	—	219	2	—	2	—
—	—	—	9	—	—	—	—	2	—
—	—	—	*	—	219	2	—	—	—
19,131	1,664	15,226	10,298	27,429	6,444	2,021	3,478	3,170	10,293
—	2	—	2,047	6	—	—	—	—	210
—	2	—	2,047	—	—	—	—	—	210
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	*	6	—	—	—	—	*

United States Exports by Product and Country

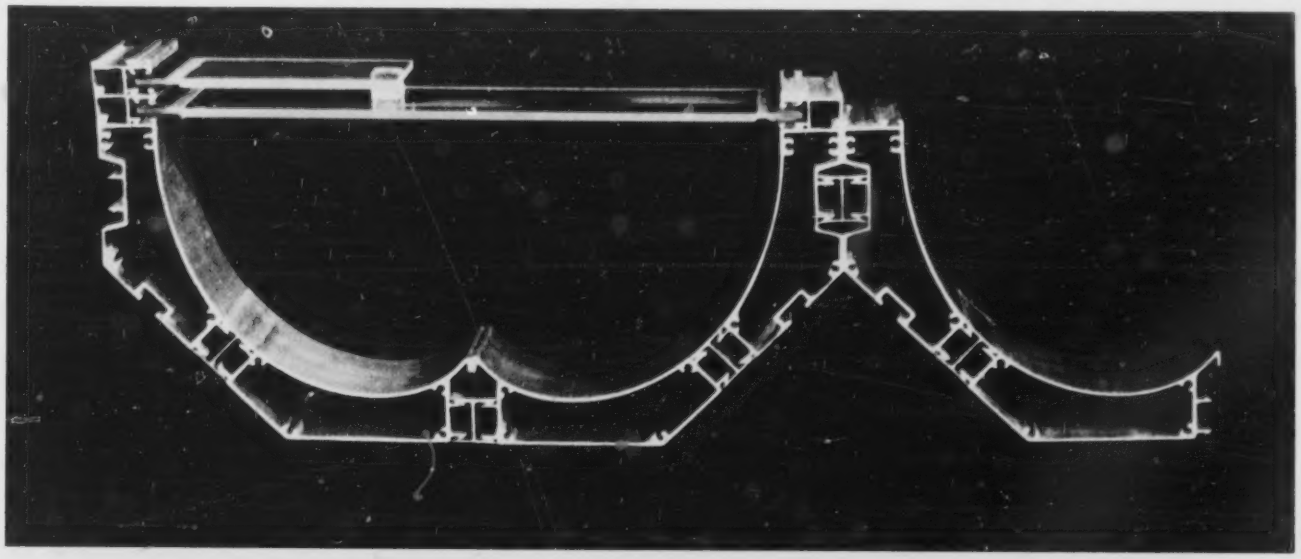
United States Exports by Product and Country, 1983

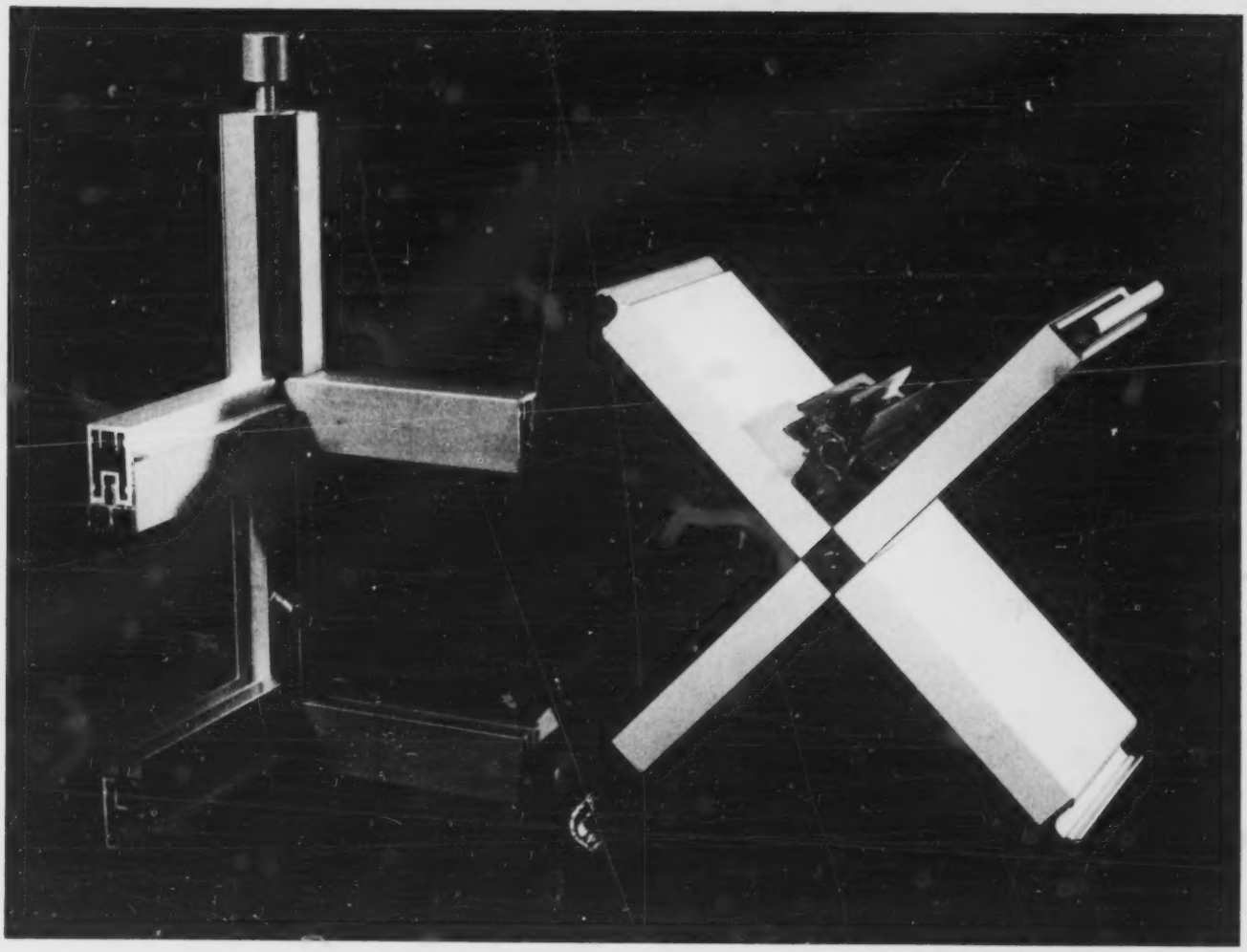
Thousands of Pounds

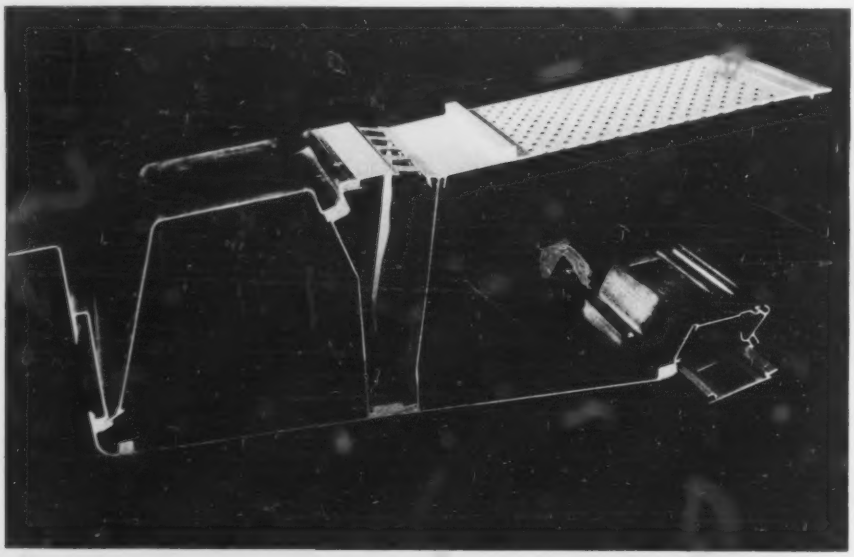
	Total	Ingot	Waste and Scrap	Semi-fabricated Products	Sheet excl Circles & Discs	Plate excl Circles & Discs	Circles & Discs
TOTAL ALL COUNTRIES	1,819,397	795,216	578,522	445,659	292,152	22,349	4,165
AFRICA	23,502	317	6,191	16,994	2,063	106	58
Egypt	448	93	—	355	—	*	—
Ghana	215	192	—	23	2	6	1
Guinea	791	—	—	791	790	—	—
Libya	13,212	—	—	13,212	—	—	—
Nigeria	891	20	—	871	687	—	—
South Africa	7,432	—	6,144	1,288	576	14	57
Other	513	13	47	453	7	86	*
NORTH AMERICA	311,303	30,051	56,645	224,607	176,221	7,978	3,124
Bermuda	28	6	—	23	5	1	—
Canada	311,275	30,045	56,645	224,584	176,216	7,977	3,124
LATIN AMERICA	93,821	22,428	29,207	42,186	20,581	3,752	155
Barbados	1,079	44	144	890	31	—	—
Brazil	1,496	186	122	1,188	480	345	15
Chile	1,547	671	649	228	86	22	2
Colombia	2,367	1,149	5	1,212	1,037	34	—
Dominican Rep	2,874	2,173	13	688	183	16	16
Jamaica	1,850	913	77	860	419	9	1
Mexico	590,551	13,010	27,721	18,820	6,427	2,983	19
Panama	1,212	849	—	363	67	12	3
Peru	1,048	381	140	526	85	11	51
El Salvador	1,723	991	159	574	50	8	—
Trinidad	2,943	819	—	2,123	62	8	—
Venezuela	11,227	14	—	11,213	10,826	145	38
Other	4,905	1,227	177	3,501	828	159	11
EAST ASIA	1,098,786	605,262	474,255	19,269	7,139	1,794	500
Hong Kong	2,153	143	160	1,850	1,026	79	5
Japan	1,034,812	558,367	466,220	10,225	2,739	1,465	282
Korea, Rep of	17,108	10,558	2,583	3,968	2,285	125	212
Taiwan	44,712	36,194	5,292	3,226	1,089	125	1
SOUTH ASIA	48,347	9,252	1,148	37,947	4,294	988	189
Indonesia	9,064	110	116	8,838	394	82	—
Israel	6,540	143	22	6,374	723	539	106
Malaysia	2,514	2,320	—	194	7	1	—
Pakistan	1,847	—	120	1,727	6	*	*
Saudi Arabia	10,777	77	—	10,699	1,411	202	61
Singapore	1,874	676	10	1,188	840	33	12
Syria	4,005	—	—	4,005	1	—	—
Thailand	7,160	5,542	2	1,616	86	114	9
U. Arab Emirates	1,104	205	—	899	63	4	*
Other	3,463	178	878	2,406	763	14	*
OCEANIA	7,603	2,833	203	4,567	604	296	10
Australia	5,969	2,823	3	3,143	511	227	2
Other	1,634	10	200	1,424	93	69	8
EUROPE	112,611	1,723	10,874	100,015	81,204	7,434	128
Belgium	5,072	276	1,559	3,237	582	983	—
Fed Rep Germany	12,157	258	5,277	6,622	3,459	1,709	17
France	3,235	306	761	2,168	448	1,065	16
Greece	1,187	11	—	1,176	1,162	—	—
Ireland	4,345	2	—	4,343	4,202	1	—
Italy	11,491	62	1,328	10,101	6,285	861	*
Netherlands	6,607	79	329	6,199	5,122	457	10
Spain	2,789	1	1,231	1,556	957	264	15
Sweden	15,883	54	40	15,788	15,608	73	—
United Kingdom	48,814	562	203	48,050	43,142	1,909	24
Other	1,032	112	146	774	236	112	47
TOTAL WESTERN WORLD	1,695,973	671,867	578,522	445,584	292,106	22,347	4,165
OTHER	123,424	123,349	—	75	46	2	—
China	123,391	123,349	—	42	28	2	—
Other	33	—	—	33	18	—	—

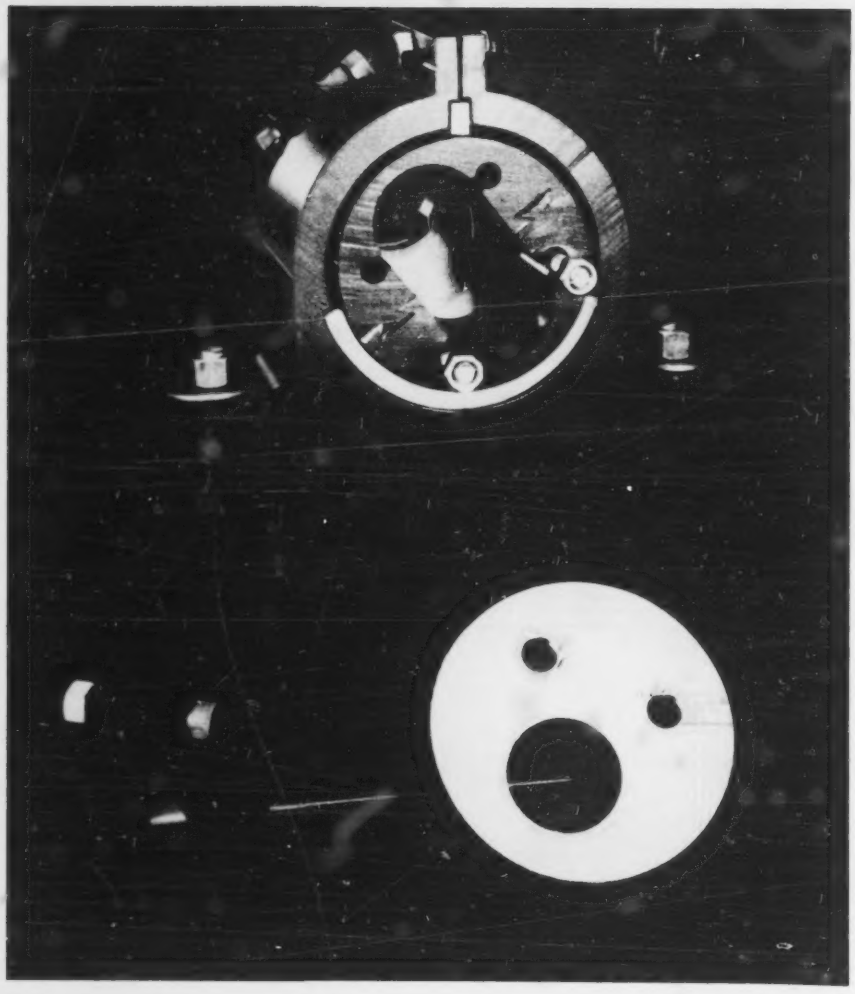
Foil not backed	Rod and Bar	Bare Wire	Cable	Electrical Conduit	Other Pipe and Tubes	Angles Shapes & Sections	Powder & Paste	Castings	Forgings
10,952	24,374	9,972	35,845	1,730	7,750	10,310	5,075	18,199	2,785
229	45	46	13,366	292	191	41	489	36	31
1	—	*	*	285	25	13	—	—	30
2	—	*	—	7	5	*	—	*	—
—	—	—	—	—	1	—	—	*	—
—	—	—	13,096	—	113	—	3	—	—
*	—	—	148	*	23	13	—	—	—
166	45	40	15	*	15	9	324	24	1
61	—	5	107	—	8	5	162	12	—
2,914	6,074	2,117	1,641	323	2,962	3,319	1,197	14,861	1,877
*	*	1	—	3	1	6	—	5	—
2,914	6,074	2,117	1,641	320	2,960	3,312	1,197	14,856	1,877
2,092	5,908	1,360	1,551	145	1,961	2,115	851	1,655	61
9	32	*	1	*	3	805	—	8	1
5	73	5	—	1	34	24	199	4	3
*	4	2	—	15	2	1	90	—	3
35	45	8	—	—	14	1	12	28	—
127	3	14	—	5	198	110	10	5	2
4	7	182	25	—	87	124	3	*	—
570	5,260	648	10	34	1,060	225	305	1,229	49
186	—	7	6	—	38	41	1	1	2
5	169	49	*	—	—	1	77	78	1
311	175	7	—	—	23	—	*	—	—
239	5	1	1,098	21	10	395	*	286	—
8	29	28	28	14	27	35	33	2	—
594	108	408	382	55	466	354	121	14	*
356	3,151	1,851	27	9	960	2,553	866	50	12
49	40	287	1	—	10	322	22	7	2
110	3,029	1,315	21	7	185	309	734	20	8
4	51	30	5	*	47	1,102	97	9	—
193	30	218	1	1	719	820	13	14	1
3,735	2,697	3,568	19,229	890	1,033	914	148	178	83
36	17	24	8,199	70	14	3	—	—	—
95	1,226	3,090	—	*	175	304	11	41	65
136	4	14	*	—	22	7	2	2	—
1	16	—	1,701	—	1	2	—	—	—
2,277	34	57	4,861	738	747	220	15	75	1
84	42	36	3	19	40	42	4	20	12
—	—	—	4,004	—	—	—	—	—	—
57	1,256	71	*	4	2	10	3	3	—
610	1	—	*	—	3	217	—	—	—
440	102	275	460	59	28	109	114	38	4
468	1,685	87	2	32	208	261	870	13	30
424	1,660	43	*	16	152	23	65	10	8
44	25	44	1	16	56	238	805	3	22
1,159	4,813	943	30	27	434	1,106	652	1,403	683
25	1,327	42	1	*	53	90	18	2	115
253	275	120	7	—	40	16	29	691	5
58	48	146	9	—	14	120	129	86	31
5	1	3	—	—	4	—	—	1	—
8	15	1	1	1	7	1	—	16	91
84	2,100	323	—	1	67	116	71	11	183
6	82	180	*	8	22	12	104	104	91
6	241	8	—	*	17	27	11	1	9
43	2	*	2	2	5	12	32	1	8
587	615	80	4	11	128	703	214	486	147
84	106	41	6	3	78	9	45	5	3
10,952	24,372	9,972	35,844	1,718	7,750	10,309	5,075	18,197	2,777
—	2	—	1	12	1	2	1	2	8
—	2	—	1	—	1	2	—	1	6
—	—	—	—	12	—	—	1	1	1

World Aluminum Statistics









The aluminum industry is international by its very nature. From the extraction of its basic source material at bauxite sites located in a number of countries throughout the world to its fabrication and distribution in every nation on earth, the aluminum industry should be viewed in a world-wide perspective. This section attempts to provide data on two of the key aspects of world aluminum, world primary aluminum production and the apparent per capita consumption of aluminum for selected countries.

World production of primary aluminum in 1983 is estimated to have been 15,172 thousand short tons,* up 2.5 percent from 1982. World primary aluminum production is presented by country for the years 1973-1983 on pages 44 and 45.

Data on the consumption of aluminum on a per capita basis are presented for 41 countries. These countries represent three-quarters of the world's production of primary aluminum. The data are presented in a uniform statistical format for the years 1973-1983. The data for supply and consumption show ingot and mill product detail for imports and exports. Midyear population figures are presented as part of the calculation of consumption on a per capita basis for each country.

*Short tons are being used uniformly in these as well as preceding sections of the Review.

Winning entries in the International Aluminum Extrusion Design Competition show extensive use of aluminum in many applications. These winning extrusions, show aluminum designs from three countries and the U.S.

World Primary Aluminum Production

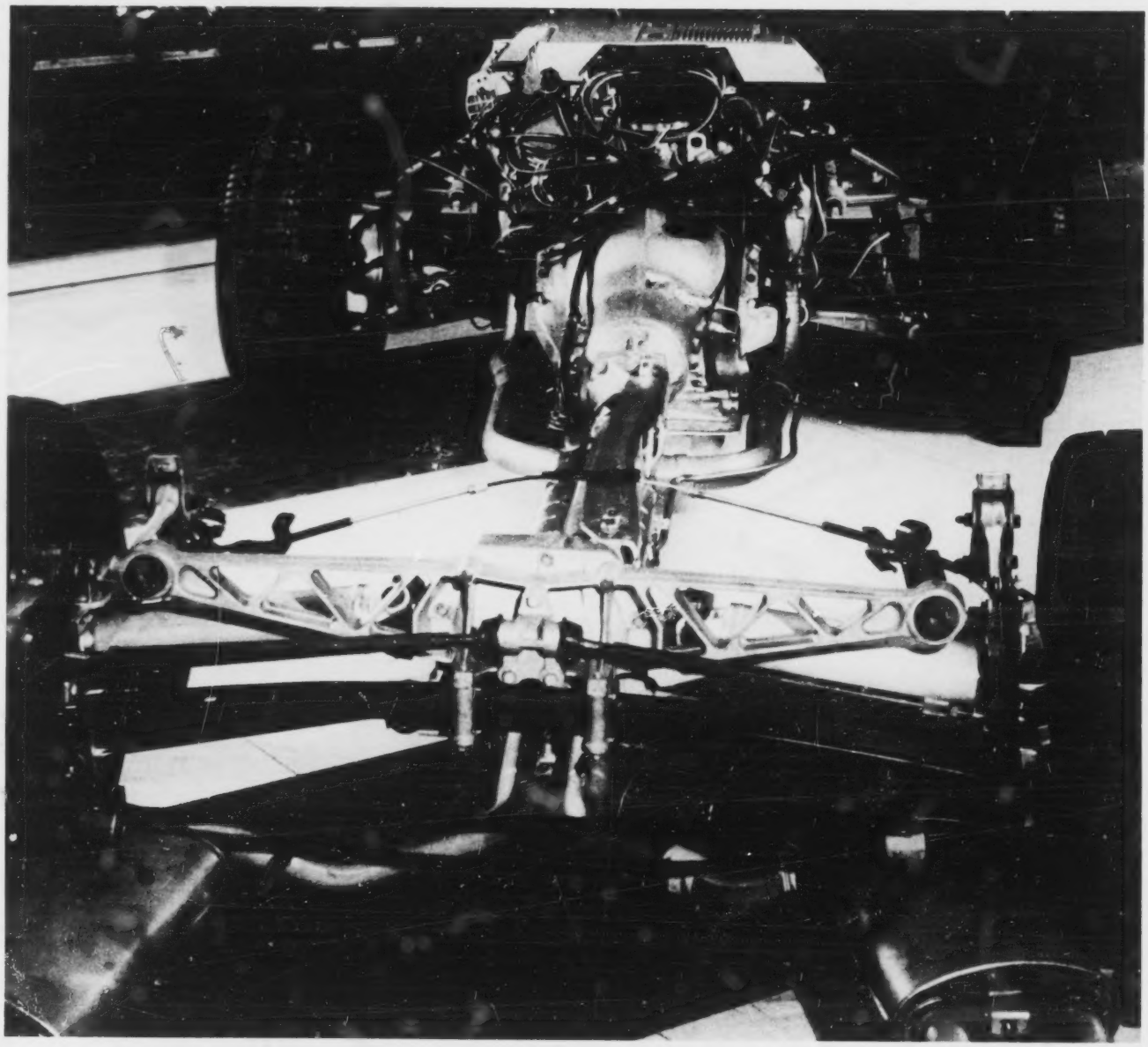
The chassis of Chevrolet's 1984 Corvette uses a record-breaking 404 pounds of aluminum in more than 80 stamped, forged, drawn or cast aluminum parts.

WORLD PRODUCTION UP 2.5 PERCENT

Estimated 1983 world production of primary aluminum totaled 15,172 thousand short tons, up 2.5 percent from the revised estimate of 14,802 thousand tons in 1982 according to Bureau of Mines data.

Over the decade 1973-1983 world production increased 13.5 percent, an annual growth rate of 1.6 percent.

The United States accounted for 24.4 percent of the world's 1983 production while Europe accounted for 43.0 percent. The remaining 32.6 percent came from Asia (9.6 percent), Canada (7.7 percent), South America (6.8 percent), Oceania (5.2 percent), Africa (2.8 percent), and others (2.7 percent).



World Primary Aluminum Production
1973-1983

Thousands of Short Tons

Country	1983p	1982r	1981r	1980r	1979r	1978	1977	1976	1975	1974	1973
TOTAL WORLD[1]	15,172	14,802r	16,596r	16,944r	16,044r	15,577	15,189	13,913	13,387	14,513	13,364
AFRICA	432	506r	495	482	441r	377	414	382	301	308	273
Cameroon	40	41	41	48	48	54	61	64	57	52	49
Egypt	165	155r	148	132	112r	111	98	65	2	—	—
Ghana	47	192r	210	207	186	123	169	167	158	173	166
South Africa	180	118r	96	95	95	89	86	86	84	83	58
NORTH AMERICA	4,899	4,783	6,178	6,307r	5,927r	5,960	5,612	4,949	4,857	6,028	5,567
Canada	1,203	1,174	1,230	1,177r	904r	1,156	1,073	698	978	1,125	1,038
United States	3,696	3,609	4,948	5,130	5,023	4,804	4,539	4,251	3,879	4,903	4,529
LATIN AMERICA	1,071	890r	860r	893r	764	450	398	350	315	278	249
Argentina	150	152r	148r	147	131	54	55	48	27	1	—
Brazil	442	330r	283	287	263	205	184	153	134	139	123
Mexico	44	45r	48	47	48	48	47	47	44	45	43
Suriname	55	66	35	51	71	61	64	51	46	38	57
Venezuela	380	297r	346	361r	251	82	48	51	64	55	26
EAST ASIA[1]	296	415	902	1,292r	1,200	1,244	1,363	1,061	1,168	1,286	1,282
Japan	282	387	849	1,203	1,114	1,166	1,310	1,013	1,117	1,232	1,209
Korea, Rep.	14	17	19	19r	24	22	20	20	20	19	34
Taiwan	—	11	34	70	62	56	33	28	31	35	39
SOUTH ASIA[1]	740	701r	558r	419r	422	435	411	439	386	326	320
Bahrain	188	188r	156r	139	139	135	134	135	128	130	113
India	225	239r	235	204	233	236	197	231	184	142	170
Indonesia	128	34	—	—	—	—	—	—	—	—	—
Iran	40	40r	6	11	15	28	23	34	56	54	37
Turkey	32	40	44	37r	35	36	57	39	18	—	—
U. Arab Emirate	127	160r	117	28	—	—	—	—	—	—	—
EUROPE	3,969	3,953r	4,100	4,134	3,951	3,866	3,816	3,680	3,566	3,664	3,155
Austria	104	104	104	104	102	101	101	98	98	101	98
France	398	430	480	476	436	431	440	424	422	434	396
Germany, F.R.	805	797r	804	806	817	816	818	768	747	759	587
Greece	154	149r	162	161	155	159	143	148	150	164	159
Iceland	86	85	82	81	80	81	82	72	68	77	79
Italy	216	298	298	299	297	298	287	228	210	238	203
Netherlands	260	277r	289	285	284	288	266	282	288	277	209
Norway	789	702r	698	720	732	704	686	681	656	731	684
Spain	394	404r	437	426	286	234	233	232	232	211	179
Sweden	91	87r	91	90	90	90	91	91	85	91	90
Switzerland	84	83r	91	95	91	88	88	86	87	96	94
United Kingdom	275	265	374	413	396	382	386	369	340	323	277
Yugoslavia	313	272r	190	178	185	194	195	201	183	162	100
OCEANIA	785	604r	588	506	467	457	433	410	356	364	356
Australia	524	420r	418	335	297	290	273	256	236	242	228
New Zealand	261	184r	170	171	170	167	160	154	120	122	128
OTHER	2,980	2,950r	2,915r	2,911	2,872	2,788	2,742	2,642	2,438	2,259	2,162
China[1]	420	410	400	400	400	400	385	350	220	165	165
Czechoslovakia[1][2]	37	37r	36r	42	41	41	40	40	48	55	53
German D.R.[1]	66	64r	66	66	66	72	72	65	65	65	101
Hungary	82	82	82	81	79	79	79	78	77	76	75
Korea, N	11	11	11	11	11	11	11	11	—	—	—
Poland[3]	46	47	73	105	106	110	115	114	113	112	112
Romania	118	229	267r	266	239	235	230	224	225	206	156
U.S.S.R[1]	2,200	2,070	1,980	1,940	1,930	1,840	1,810	1,760	1,690	1,580	1,500

(1) Estimated by the Bureau of Mines, Department of the Interior
(2) Includes secondary unalloyed ingot
(3) Includes primary alloyed ingot

r — Revised
p — Preliminary
Detail may not add to totals due to rounding.
SOURCE: Bureau of Mines, U.S. Department of Interior

Aluminum Supply and Apparent Consumption—Selected Countries

PER CAPITA CONSUMPTION UP 2.6 PERCENT

Per capita aluminum consumption for those countries which provided both 1982 and 1983 data, increased an average of 2.6% in 1983 as compared with 1982. Of the 33 countries which responded to the 1983 survey, 19 (58%) showed increased usage in 1983, while the remainder 14 (42%) indicated decreased or steady usage.

The United States was again the largest user of aluminum on a per capita basis (57.3). Other large users were W. Germany (48.2), Japan (42.7), and Norway (29.4).

Per Capita Aluminum Consumption Formula

1. + Primary aluminum production
2. ± Government stockpile adjustment
3. + Imports of ingot
4. + Imports of mill products (aluminum alloy weight)
5. + Recovery of secondary aluminum alloys (from domestic and imported scrap)
6. − Exports of ingot
7. − Exports of mill products (aluminum alloy weight)
8. = Apparent aluminum consumption
9. + Beginning of year inventory
10. − End of year inventory
11. ± Inventory change
12. = Aluminum consumption (with inventory change)
13. ÷ Mid-year population
14. = Per capita consumption (lbs.) (with inventory change)
15. = Per capita consumption (lbs.) (with inventory change)

DESCRIPTION:

The Aluminum Association, in conjunction with industry associations in foreign countries, and, in some instances appropriate government agencies, is developing a joint program to compile uniform statistical data showing total supply and apparent consumption. Total supply for an individual country consists of primary production, imports, and secondary recovery. Apparent consumption is equal to the sum of these sources of total supply less exports and inventory changes. Production of primary aluminum for foreign countries is tabulated for the years 1973-1983 on pages 44 and 45.

The tables on pages 48-60 show total supply and apparent consumption corresponding to the above format for the following 41 countries:

Argentina
Australia
Austria
Bahrain
Belgium
Brazil
Cameroon
Canada
Denmark
Finland
France
Germany, West
Greece
Iceland
Indonesia
Iran
Ireland
Israel
Italy
Japan
Korea, South
Mexico
Netherlands
New Zealand
Nicaragua
Norway
Panama
Philippines
Portugal
El Salvador
Saudi Arabia
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan
Turkey
United Kingdom
United States
Venezuela

The format for compiling total supply and apparent consumption data is shown below.

In order to develop a basis for showing relative aluminum usage by country and to provide a measure of trend over time, per capita consumption data have been calculated for each country. For this purpose mid-year population estimates have been used. It is important to emphasize that these estimates are not the only way of measuring relative consumption data among countries. Obviously, the composition of a country's population, standard of living, industrialization, climate, availability and economies of other materials, and a number of other important considerations affect the per capita use of aluminum. The formula is used because it is simple and permits the Association to compile data for more countries, with their cooperation, than can be compiled using more detailed information.

When data for individual lines are not available or are not appropriate, they are omitted. Inventory changes cover suppliers' inventories only. Consumption estimates exclude changes in customer inventories.

The components of the formula are numbered and cross referenced to the country details on pages 48-61.

A summary of per capita consumption covering the years 1973-1983 for each of the countries is shown on page 47.

Per Capita Aluminum Consumption of Selected Countries

Pounds per person per year

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Argentina*	5.7	4.9r	4.0r	4.9	7.1	4.9	5.9	6.2	8.3	9.0	8.7
Australia*	33.8	36.7	41.4	38.9	37.6	32.5	31.3	31.0	25.7	33.6	29.1
Austria*	25.5	23.8	26.5	27.6	25.0	23.7	24.7	23.3	24.4	20.4	19.8
Bahrain*	18.9	10.8	13.2	20.3	27.5	15.1	22.5	23.7	24.9	26.0	18.3
Belgium	21.0	20.6r	16.1r	20.6	20.3	19.6	21.4	23.4	16.5	23.0	21.9
Brazil*	5.0	5.5	5.3	6.5	6.4	5.8	5.8	5.3	5.2	4.9	4.1
Cameroon	4.5	3.6	3.5	6.4	4.7	3.9	5.3	8.4	6.8	8.0	3.6
Canada*	32.3	29.1r	36.1	35.5	37.1	35.7	31.5	30.8	28.4	35.4	33.1
Denmark	30.7	32.4	29.8	30.8	34.2	32.2	28.0	27.4	19.6	25.9	25.6
Finland	11.5	14.6r	14.1r	14.3r	16.5r	12.0r	19.3	20.6	21.3	22.4	17.5
France*	27.2	27.3	26.0	30.1	28.1	25.4	26.0	26.5	20.5	25.0	24.8
Germany, West*	48.2	43.0	44.8	48.6	48.6	42.9	41.8	42.6	32.2	36.1	28.8
Greece	na	19.5r	22.0	21.8	15.7	8.7	9.0	8.1	9.8	8.6	7.0
Iceland	27.8	23.4	27.9	21.9	20.4	15.9	18.9	18.2	16.5	22.5	16.0
Indonesia	na	na	na	na	0.6	0.6	0.6	0.5	2.9	1.5	1.9
Iran	na	na	na	na	na	na	4.3*	4.2*	3.0*	2.8*	2.0*
Ireland	8.3	8.8	9.1	9.6	10.9	10.6	7.9	9.1	4.1	10.6	7.8
Israel	na	na	na	na	na	na	9.4	9.9	na	16.9	9.4
Italy*	29.2	27.1	27.6	32.4	28.0	24.7	24.3	21.8	15.2	23.3	21.0
Japan*	42.7	41.9	41.9	45.8	42.6	42.8	35.4	35.8	26.9	32.5	37.7
Korea, Republic of	9.6	7.5	6.8	4.2	7.1	7.1	5.3	3.7	2.6	2.6	1.8
Mexico*	2.5	4.9	6.5	5.6	4.9	4.1	2.6	3.4	3.5	3.8	3.8
The Netherlands	24.2*	25.9r*	20.1*	27.2*	26.0*	23.0*	25.1*	29.1*	18.3*	17.1*	14.8*
New Zealand*	18.4	15.4	20.5	17.2	19.0	17.1	17.6	20.7	15.1	27.3	23.0
Nicaragua	na	na	na	na	na	0.5	1.3	1.0	1.4	1.8	1.1
Norway*	29.4	49.8	41.7	50.0	53.1	46.1	50.9	55.8	43.6	51.6	37.8
Panama	3.2	1.8	2.2	2.0	2.0	1.5	1.8	2.6	2.6	3.8	3.4
Philippines, Rep. of	0.8	1.1r	0.4r	0.8r	1.5r	0.8r	1.0	1.0	0.5	0.9	0.8
Portugal	11.4	11.9r	11.9r	8.5r	7.6r	8.6r	6.9	5.6	2.7	7.9	5.1
El Salvador	1.1	0.5	0.6	0.4	1.0	1.0	0.4	1.1	0.4	0.5	0.6
Saudi Arabia	na	9.4	25.1	24.8	19.0	17.5	14.1	5.2	2.8	2.5	na
Singapore	22.9	23.0	25.3	20.1	20.4	15.0	15.1	12.5	7.8	14.8	15.0
South Africa*	na	9.0	10.0	9.9(1)	5.8	5.1	5.2	6.0	6.2	6.5	5.7
Spain*	na	11.2e	11.3	14.2	12.8	12.5	14.1	13.4	11.6	13.7	12.1
Sweden*	41.1	38.8	34.0	34.4	36.9	32.6	34.5	40.8	39.8	42.5	40.5
Switzerland*	33.0	33.3	34.0	37.7	31.4	29.8	28.6	27.9	22.2	34.9	31.1
Taiwan, Republic of China*	19.6	13.7	14.5	13.4	15.0	12.8	10.5	8.7	6.9	6.6	7.8
Turkey	3.4	2.8	2.2	2.1	2.5	2.5	4.3	3.4	3.7	1.7	2.5
United Kingdom	21.9	20.3r	20.7	21.6	22.1	26.6	26.4	25.1	21.7	27.4	27.5
United States*	57.3	51.0r	55.2	56.8	65.8	65.9	60.3	57.1	44.9	60.4	65.1
Venezuela*	13.6	13.9	9.0	15.2	14.8	11.3	9.7	8.1	6.1	5.2	4.8

*Adjusted for inventory change
r — Revised
na — Not available at publication time
e — Estimated
(1) See footnote (3) page 58.

Per Capita Aluminum Consumption

Thousands of short tons

ARGENTINA, REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	146.4	151.6r	147.8r	146.8	130.5	54.5	57.8	47.5	26.1	0.8	—
3. + Imports of ingot	—	—	—	—	—	—	0.1	22.3	53.6	93.4	80.7
4. + Imports of mill products	1.3	11.6	5.6r	4.4	1.5	0.6	0.3	0.1	3.7	1.1	7.2
5. + Recovery of secondary	7.7	6.6r	5.5	7.7e	8.8e	8.8e	9.7e	15.9e	18.3e	21.4e	18.6e
6. − Export of ingot	48.3	74.5	97.2	69.9	34.5	8.3	—	—	—	—	—
7. − Exports of mill products	16.0	18.1	12.5r	9.8	4.5	11.2	3.7	1.2	1.7	1.4	2.6
8. = Apparent aluminum consumption	91.2	77.2r	49.3r	79.2	101.8	44.4	64.2	84.5	100.0	115.3	103.9
11. ± Inventory change	+9.5	+7.7	−7.5	+11.0	+6.6	−20.5	−13.2	+4.5	−6.0	+3.1	3.0
12. = Aluminum consumption	81.7	69.4r	56.8r	68.2	95.2	64.9	77.4	80.0	106.0	112.2	106.9
13. ÷ Mid-year population (mill.)	28.8	28.4r	28.1r	27.9	26.8	26.5	26.1	25.7	25.4	25.0	24.7
14. = Per capita consumption (lbs.)(1)	6.3	5.4r	3.5	5.7	7.6	3.3	4.9	6.6	7.9	9.2	8.4
15. = Per capita consumption (lbs.)(2)	5.7	4.9r	4.0r	4.9	7.1	4.9	5.9	6.2	8.3	9.0	8.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
e — Estimated

SOURCE: ALUAR Alumino Argentino S.A.I.C —Ministerio Defensa (COPEDESMEL).

AUSTRALIA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	522.6	419.1	417.4	333.5	301.1	293.7	237.7	254.9	234.9	240.0	227.9
3. + Imports of ingot	5.0	14.6	9.3	8.8	3.9	0.2	—	—	0.3	10.4	8.9
4. + Imports of mill products	7.1	14.4	15.9	11.8	8.9	4.0	4.5	4.8	4.6	11.9	4.2
5. + Recovery of secondary	41.6	44.9	48.9	41.9	33.6	26.9	27.1	30.1	27.1	40.0	31.6
6. − Exports of ingot	237.8	204.6	135.1	39.2	69.6	84.1	75.7	77.7	83.9	55.8	62.3
7. − Exports of mill products	54.6	35.9	28.0	20.3	17.7	5.3	3.6	1.5	1.7	6.2	6.7
8. = Apparent aluminum consumption	283.7	240.5	328.4	336.5	260.1	235.3	226.0	210.6	181.3	240.3	203.6
11. + Inventory change	+23.9	−26.1	−20.9	+52.2	−10.7	+4.2	+5.6	+1.1	+6.3	+16.3	+11.3
12. = Aluminum consumption	259.9	278.4	307.4	284.3	270.8	231.0	220.4	209.5	175.0	224.0	192.3
13. ÷ Mid-year population (mill.)	15.4	15.2	14.9	14.6	14.4	14.2	14.1	13.5	13.6	13.3	13.2
14. = Per capita consumption (lbs.)(1)	36.9	31.7	44.3	46.1	36.1	33.1	32.1	31.2	26.6	36.1	30.8
15. = Per capita consumption (lbs.)(2)	33.8	36.7	41.4	38.9	37.6	32.5	31.3	31.0	25.7	33.6	29.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change—primary metal only

SOURCE: Aluminium Development Council of Australia Limited

AUSTRIA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	103.8	103.5	103.8	104.1	102.2	100.6	101.2	97.7	98.3	100.8	98.2
3. + Imports of ingot	44.3	42.7	36.6	38.8	33.8	16.4	21.2	23.1	19.8	19.6	18.7
4. + Imports of mill products	53.5	46.7	41.4	43.2	40.6	33.0	32.0	26.9	19.1	27.3	24.0
5. + Recovery of secondary	17.7	15.7	15.2	15.8	9.6	10.3	11.7	9.4	6.8	7.9	9.5
6. − Exports of aluminum ingot	28.2	28.2	27.6	10.8	11.4	12.9	9.6	9.5	9.4	24.1	29.9
7. − Exports of mill products	111.8	86.6	76.2	73.2	81.9	74.6	62.1	66.2	42.8	50.0	38.8
8. = Apparent aluminum consumption	79.4	93.7	93.4	117.8	92.9	72.8	94.4	81.4	91.8	81.5	81.8
11. + Inventory change	−16.2	+4.2	−6.0	+14.3	−0.7	−16.1	+2.0	−6.1	—	+5.1	+7.5
12. = Aluminum consumption	95.6	89.5	99.3	103.5	93.6	88.8	92.4	87.5	91.8	76.4	74.3
13. ÷ Mid-year population (mill.)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
14. = Per capita consumption (lbs.)(1)	21.2	24.9	24.9	31.4	24.8	19.4	25.1	21.7	24.4	21.7	21.8
15. = Per capita consumption (lbs.)(2)	25.5	23.8	26.5	27.6	25.0	23.7	24.7	23.3	24.4	20.4	19.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Fachverband Der Metallindustrie Osterreichs

Detail may not add to totals due to rounding.

BAHRAIN

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	189.3	188.5	156.5	139.0	140.1	135.7	136.8	135.7	129.0	132.4	113.6
5. + Recovery of secondary	—	1.7	—	—	—	—	—	—	—	—	—
6. − Exports of aluminum ingot	210.0	173.1	91.5	86.0	144.5	147.8	130.1	139.0	94.9	115.8	91.5
7. − Exports of mill products	19.8	13.2	16.5	18.7	6.6	5.5	3.3	3.3	2.2	2.2	2.2
8. = Apparent aluminum consumption	−40.6	3.4	48.5	34.2	−11.0	−17.6	3.3	−6.6	32.0	14.3	19.9
9. + Beginning inventory	101.1	99.2	52.9	22.1	37.5	57.4	57.4	67.3	38.6	27.6	9.9
10. − Ending inventory	56.9	101.1	99.2	52.9	22.1	37.5	57.4	57.4	67.3	38.6	27.6
11. ± Inventory change	−44.2	+1.9	+46.3	+30.8	−15.4	−19.9	—	−9.9	+28.7	+11.0	+17.7
12. = Aluminum consumption	3.6	2.0	2.2	3.4	4.4	2.3	3.3	3.3	3.3	3.3	2.2
13. ÷ Mid-year population (mill.)	0.384	0.371	0.351	0.335	0.320	0.305	0.293	0.279	0.265	0.254	0.241
14. = Per capita consumption (lbs.)(1)	−211.3	18.3	276.4	204.2	na	na	22.5	na	241.5	112.6	165.1
15. = Per capita consumption (lbs.)(2)	18.9	10.8	13.2	20.3	27.5	15.1	22.5	23.7	24.9	26.0	18.3

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
na Not available at publication time

SOURCE: Aluminium Bahrain B.S.C.

BELGIUM

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	319.3	294.8	270.0	278.3	278.7	294.1	262.8	284.5	207.5	278.9	258.7
4. + Imports of mill products(1)	99.8	95.8r	69.3	71.5	96.0	84.7	83.0	86.3	59.0	61.5	55.7
5. + Recovery of secondary	—	—	—	—	1.1e	1.1e	3.3e	2.9e	2.2e	3.0e	3.0e
6. − Exports of ingot	19.1	15.2	32.7	21.6	11.9	11.2	14.4	15.6	11.0	24.4	22.3
7. − Exports of mill products(1)	296.6	273.9r	227.4	226.1	270.5	256.1	241.8	231.6	184.8	202.2	186.3
8. = Apparent aluminum consumption(2)	103.4	101.4r	79.3	102.2	99.3	96.2	104.7	114.4	81.1	112.7	106.0
13. + Mid-year population (mill.)	9.9	9.9	9.9	9.9	9.8	9.8	9.8	9.8	9.8	9.8	9.7
14. = Per capita consumption (lbs.)(3)	21.0	20.6r	16.1r	20.6	20.3	19.6	21.4	23.4	16.5	23.0	21.9

NOTES:
(1) Excludes thin foil
(2) Excludes thin foil, welded tubes and blanks Stated consumption will not add from lines 3, 4, 5, 6, & 7
(3) Without inventory change
e — estimated

SOURCE: Federation Des Enterprises De Metaux Non Ferraux

BRAZIL

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	441.7	329.6	282.6	287.3	262.5	205.5	184.2	153.4	133.7	125.2	123.1
3. + Imports of ingot	3.3	11.9	31.2	51.5	57.1	66.6	91.3	86.1	86.8	115.5	57.0
4. + Imports of mill products	3.1	4.3	9.6	24.6	30.1	16.3	32.3	17.0	17.2	23.2	13.7
5. + Recovery of secondary	43.1	41.7	41.1	50.8	59.3	54.2	36.9	30.9	22.7	24.7	20.4
6. − Exports of ingot	128.2	7.4r	2.4	—	—	—	—	—	—	—	—
7. − Exports of mill products	58.8	12.9r	20.5	12.7	9.5	4.3	3.1	2.0	2.0	2.0	1.1
8. = Apparent aluminum consumption	304.2	367.2r	341.6	401.5	399.5	338.3	341.6	285.4	258.5	286.6	213.1
11. ± Inventory change	−18.1	+23.4r	+22.9	+12.0	+26.7	+7.1	+19.4	—	−18.4	+34.5	+6.1
12. = Aluminum consumption	322.3	343.8	318.7	389.4	372.8	331.2	322.2	285.4	276.9	252.1	207.0
13. ÷ Mid-year population (mill.)	128.0	125.0	122.0	119.1	116.3	113.5	110.8	108.1	105.5	103.0	100.5
14. = Per capita consumption (lbs.)(1)	4.8	5.9r	5.7	6.7	6.9	6.0	6.2	5.3	4.9	5.6	4.2
15. = Per capita consumption (lbs.)(2)	5.0	5.5	5.3	6.5	6.4	5.8	5.8	5.3	5.2	4.9	4.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Associacao Brasileira do Alumino
Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

CAMEROON

Thousands of short tons

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	85.3	87.0	72.1	47.4	49.2	45.5	50.9	53.7	57.2	51.6	48.6
3. + Imports of ingot	—	—	—	—	0.9	0.1	—	—	—	—	—
4. + Imports of mill products	—	1.0	1.0	1.0	0.4	0.3	1.3	2.0	0.9	0.4	0.7
6. – Exports of aluminum ingot	56.3	61.1	49.1	14.7	22.3	16.9	26.3	22.9	27.6	23.5	30.9
7. – Exports of mill products	10.8	11.8	7.7	5.6	11.0	11.1	6.0	4.9	7.9	4.6	8.0
8. = Apparent aluminum consumption	18.2	15.1	16.3	28.2	17.2	18.0	20.0	27.9	22.6	23.9	10.4
11. ± Inventory change	– 1.8	– 0.6	+ 1.7	+ 2.0	– 1.9	+ 2.5	– 1.0	+ 0.3	+ 0.8	– 1.2	– 0.7
12. = Aluminum consumption	20.0	15.7	14.7	26.2	19.1	15.4	20.9	27.6	21.8	25.1	11.0
13. ÷ Mid-year population (mill.)	8.87	8.65	8.50	8.25	8.06	7.91	7.91	6.53	6.40	6.28	6.17
14. = Per capita consumption (lbs.)(1)	4.1	3.5	3.7	6.8	4.3	4.6	5.1	8.6	7.1	7.6	3.4
15. = Per capita consumption (lbs.)(2)	4.5	3.6	3.5	6.4	4.7	3.9	5.3	8.4	6.8	8.0	3.6

NOTES: na Not available at publication time

SOURCE: Societe de Vente de l'Aluminium Pechiney

CANADA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	1,206.0	1,179.4	1,232.5	1,183.9	951.6	1,158.0	1,076.3	695.5	969.9	1,111.8	1,030.0
3. + Imports of ingot	33.7	26.9	15.8	10.9	26.5	12.7	22.9	24.9	20.1	52.9	49.5
4. + Imports of mill products	134.5	121.9	137.9	130.2	158.9	118.7	106.9	102.9	67.7	119.2	118.1
5. + Recovery of secondary	61.7	55.1	71.6e	71.8	93.1	82.5	53.2	47.0	42.9	39.9	42.7
6. – Exports of ingot	1,020.1	988.1	799.7	865.0	606.8	950.8	722.3	559.4	561.0	751.2	769.9
7. – Exports of mill products	71.8	46.5	44.6	43.7	39.8	43.9	48.0	31.1	26.9	52.1	31.4
8. = Apparent consumption	344.1	348.7	613.4	488.1	583.9	377.2	489.1	279.8	512.7	520.5	439.0
11. ± Inventory change	– 58.3	8.7r	+ 176.4	+ 63.8	+ 143.7	– 42.1	+ 122.7	– 75.4	189.3	123.9	73.3
12. = Aluminum consumption	402.5	357.4r	437.1	424.3	440.1	419.2	366.4	355.2	323.4	396.6	365.7
13. ÷ Mid-year population (mill.)	24.9	24.6	24.2	23.9	23.7	23.5	23.3	23.1	22.8	22.4	22.1
14. = Per capita consumption (lbs.)(1)	27.6	28.3	50.7	37.5	49.3	32.1	42.0	24.2	45.0	46.4	39.7
15. = Per capita consumption (lbs.)(2)	32.3	29.1r	36.1	35.5	37.1	35.7	31.5	30.8	28.4	35.4	33.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
e — Estimated
r — Revised

SOURCE: Statistics Canada and Alcan Canada Products Ltd

DENMARK

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	30.9	27.2	23.4	26.7	24.8	20.7	17.4	14.6	7.6	9.4	7.8
4. + Imports of mill products	70.4	63.3	59.6	65.7	69.3	64.0	59.5	62.6	43.7	59.4	57.3
5. + Recovery of secondary	30.9	35.6	33.4	27.4	34.3	30.5	22.6	15.4	16.6	19.1	16.5
6. – Exports of aluminum ingot	26.5	22.0	22.0	20.8	23.7	19.0	15.0	10.4	8.2	9.9	7.3
7. – Exports of mill products	27.3	21.3	18.2	20.0	17.1	13.8	13.3	12.7	10.1	12.6	10.1
8. = Apparent aluminum consumption	78.4	82.8	76.2	79.0	87.6	82.3	71.2	69.6	49.6	65.4	64.3
13. ÷ Mid-year population (mill.)	5.11	5.12	5.12	5.12	5.12	5.10	5.09	5.07	5.06	5.05	5.02
14. = Per capita consumption (lbs.)(1)	30.7	32.4	29.8	30.8	34.2	32.2	28.0	27.4	19.6	25.9	25.6

NOTES:
(1) Without inventory change

SOURCE: Danmarks Statistik

Detail may not add to totals due to rounding.

FINLAND

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	29.0	30.0	31.7	29.4r	27.4	23.9	31.5	27.0	21.2	25.6	19.9
4. + Imports of mill products	26.5	24.7	24.1r	31.7r	29.5r	22.4r	32.6	34.8	29.3	38.9	28.7
5. + Recovery of secondary	6.0	7.5r	—	7.3r	8.4r	6.1r	10.3	8.0	6.8	6.4	8.8
6. – Exports of aluminum ingot	11.8	6.9	5.1r	4.3	1.4r	3.0r	3.6	1.3	0.5	0.9	1.5
7. – Exports of mill products	21.7	20.0	24.3r	29.9r	24.6r	20.9r	25.0	19.8	17.7	17.2	15.2
8. = Apparent aluminum consumption	27.9	35.3r	33.7r	34.3r	39.4r	28.4r	45.8	48.7	50.2	52.8	40.7
13. ÷ Mid-year population (mill.)	4.9	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.7
14. = Per capita consumption (lbs.)[1]	11.5	14.6r	14.1r	14.3r	16.5r	12.0r	19.3	20.6	21.3	22.4	17.5

NOTES:
(1) Without inventory change

SOURCE: Central Statistical Office of Finland

FRANCE

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	397.7	430.3	480.2	476.1	435.5	431.4	439.6	424.5	421.7	433.7	395.6
3. + Imports of ingot	435.0	388.0	331.1	366.4	347.6	320.9	303.5	277.1	240.2	289.8	253.3
4. + Imports of mill products	228.0	225.3	209.8	231.4	205.4	158.7	156.1	187.2	115.3	144.6	147.1
5. + Recovery of secondary	187.4	169.4	187.2	187.4	182.7	177.2	168.1	151.0	125.7	140.6	139.2
6. – Exports of ingot	177.1	201.4	210.0	195.5	173.7	183.4	182.8	164.5	180.7	196.2	202.4
7. – Exports of mill products	324.7	289.9	273.9	253.5	286.5	236.6	207.5	178.0	142.1	152.1	145.5
8. = Apparent aluminum consumption	746.2	721.8	724.3	812.2	710.9	668.3	677.0	697.3	580.1	658.3	587.3
11. ± Inventory change	+ 5.5	– 20.0	+ 24.3	+ 4.2	– 39.9r	– 6.7	– 11.8	– 4.2	+ 40.9	+ 7.8	– 58.5
12. = Aluminum consumption	740.6	741.7	701.1	808.0	750.8	675.0	688.8	701.5	539.2	650.5	645.8
13. ÷ Mid-year population (mill.)	54.4	54.3	53.9	53.7	53.5r	53.1	53.0	52.9	52.9	52.1	52.1
14. = Per capita consumption (lbs.)[1]	27.4	26.6r	26.9	30.3	26.6r	25.2	25.5	26.4	22.0	25.2	22.5
15. = Per capita consumption (lbs.)[2]	27.2	27.3	26.0	30.1	28.1r	25.4	26.0	26.5	20.5	25.0	24.8

NOTES (1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Societe de Vente de l'Aluminium Pechiney

GERMANY, FEDERAL REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	819.3	796.7	803.5	805.5	817.8	815.3	817.7	768.4	747.1	759.2	587.2
3. + Imports of ingot	652.7	623.1	551.2	671.1	563.8	478.4	485.5	459.9	317.0	379.7	448.6
4. + Imports of mill products	329.6	289.1	264.7	313.2	289.1	226.5	235.7	220.6	151.3	155.6	174.3
5. + Recovery of secondary	507.0	438.8	455.7	468.5	468.9	434.7	390.4	353.6	296.8	326.4	327.7
6. – Exports of ingot	354.0	281.5	278.9	246.6	273.1	299.4	219.5	310.2	176.1	192.4	115.3
7. – Exports of mill products	565.4	495.7	448.5	427.6	436.0	383.8	332.8	302.7	211.6	297.9	228.3
8. = Apparent aluminum consumption	1,389.2	1,370.6	1,347.6	1,584.0	1,430.6	1,271.7	1,377.0	1,189.6	1,124.5	1,130.6	1,194.2
11. ± Inventory change	– 89.7	+ 52.9	– 32.2	+ 94.6	– 61.9	– 44.2	+ 94.5	– 121.3	+ 129.2	+ 10.6	– 9.3
12. = Aluminum consumption	1,479.0	1,317.7	1,379.7	1,489.4	1,492.5	1,315.9	1,282.5	1,310.9	995.3	1,120.0	1,203.5
13. ÷ Mid-year population (mill.)	61.4	61.3	61.7	61.3	61.4	61.3	61.4	61.5	61.8	62.1	62.0
14. = Per capita consumption (lbs.)[1]	45.3	44.8	43.8	51.7	46.6	41.5	44.9	38.7	36.4	36.4	38.5
15. = Per capita consumption (lbs.)[2]	48.2	43.0	44.8	48.6	48.6	42.9	41.8	42.6	32.2	36.1	38.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Aluminum-Zentrale e.V.

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

GREECE

Thousands of short tons

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	150.1	195.5r	204.6	202.8	185.2	160.5	144.8	148.0	149.6	164.2	155.4
3. + Imports of ingot	2.3	2.3	3.1	0.1	0.3	0.3	5.0	4.0	1.0	1.9	1.5
4. + Imports of mill products	5.8	3.6r	4.7	4.3	3.9	3.3	4.2	2.8	2.0	2.4	2.5
6. − Exports of aluminum ingot	60.7	73.4	76.3	66.4	81.6	93.9	85.4	98.0	98.2	112.2	115.5
7. − Exports of mill products	44.8	32.5r	29.4	36.0	33.1	29.2	26.7	19.8	10.1	17.7	12.8
8. = Apparent aluminum consumption	52.7	95.6r	106.7	104.4	74.7	41.0	41.9	37.0	44.3	38.6	31.5
13. ÷ Mid-year population (mill.)	na	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0
14. = Per capita consumption (lbs.)(1)	na	19.5r	22.0	21.8	15.7	8.7	9.0	8.1	9.8	8.6	7.0

NOTES:
(1) Without inventory change
e — Estimated.

SOURCE: National Statistical Service of Greece.

ICELAND

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	84.9	82.9	81.2	80.6	78.3	81.3	77.9	71.9	64.9	75.4	78.4
4. + Imports of mill products	3.3	2.8	3.2	2.5	2.0	3.2	2.1	2.0	1.7	2.3	1.7
6. − Exports of aluminum ingot	115.0	67.8	70.7	74.3	85.1	83.6	81.8	85.5	48.1	69.5	87.9
8. = Apparent aluminum consumption	−26.8	17.9	13.8	8.8	−4.9	1.0	−1.8	−11.7	18.5	8.2	−7.8
9. + Beginning inventory	37.3	22.2	11.6	5.3	12.5	13.2	17.1	30.8	14.0	8.2	17.5
10. − Ending inventory	3.3	37.3	22.2	11.6	5.3	12.5	13.2	17.1	30.8	14.0	8.2
11. ± Inventory change	−34.0	+15.1	+9.6	+6.3	−7.2	−0.8	−3.9	−13.7	+16.8	+5.8	−9.4
12. = Aluminum consumption	7.2	2.8	3.2	2.5	2.3	1.8	2.1	2.0	1.8	2.2	1.7
13. ÷ Mid-year population (mill.)(1)	0.238	0.235	0.229	0.228	0.226	0.223	0.222	0.220	0.218	0.216	0.213
14. = Per capita consumption (lbs.)(2)	−225.2	151.9	120.5	77.2	na	8.9	na	na	169.7	75.9	na
15. = Per capita consumption (lbs.)(3)	60.5	23.4	27.9	21.9	20.4	15.9	18.9	18.2	16.5	22.5	16.0

NOTES:
(1) Because of its small population, shown in fine detail
(2) Without inventory change
(3) Adjusted for inventory change

SOURCE: Icelandic Aluminium Co. Ltd.

INDONESIA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	na	na	na	na	16.7	13.5	12.9	9.3	7.7	5.2	2.9
4. + Imports of mill products	na	na	na	na	27.9	24.0	24.2	23.0	22.3	22.2	23.8
5. + Recovery of secondary	na	na	na	na	—	*	*	*	162.6	69.5	153.2
7. − Exports of mill products	na	na	na	na	0.2	0.1	0.2	0.2	—	—	—
12. = Apparent aluminum consumption	na	na	na	na	44.3	37.5	36.7	32.0	192.6	96.9	179.9
13. ÷ Mid-year population (mill.)	na	na	na	na	138.0	135.3	132.6	130.2	132.0	129.0	126.0
14. = Per capita consumption	na	na	na	na	0.6	0.6	0.6	0.5	2.9	1.5	2.9

NOTES:
(1) Without inventory change
na Not received at publication time

** Less than 50 tons*

SOURCE: Department of Mines and Energy, Indonesia
Detail may not add to totals due to rounding

IRAN

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	na	na	na	na	na	na	23.2	33.8	45.3	55.9	35.9
3. + Imports of ingot	na	na	na	na	na	na	14.3	11.0	—	—	—
4. + Imports of mill products	na	na	na	na	na	na	18.7	20.9	3.0	9.9	17.2
5. + Recovery of secondary	na	na	na	na	na	na	5.5	7.2	17.0	7.1	1.1
6. – Exports of ingot	na	na	na	na	na	na	—	—	14.0	19.8	19.1
7. – Exports of mill products	na	na	na	na	na	na	—	—	—	0.2	—
8. = Apparent aluminum consumption	na	na	na	na	na	na	61.8	72.9	51.3	52.9	35.0
9. + Beginning inventory	na	na	na	na	na	na	13.9	11.7	9.4	6.2	4.8
10. – Ending inventory	na	na	na	na	na	na	3.3	13.9	10.6	13.2	5.7
11. ± Inventory change	na	na	na	na	na	na	– 10.5	+ 2.2	+ 1.2	+ 7.0	+ 1.0
12. = Aluminum consumption	na	na	na	na	na	na	72.4	70.7	50.1	45.9	34.1
13. ÷ Mid-year population (mill.)	na	na	na	na	na	na	33.5	34.0	33.5	32.5	31.6
14. = Per capita consumption (lbs.)[1]	na	na	na	na	na	na	3.7	4.3	3.1	3.2	2.2
15. = Per capita consumption (lbs.)[2]	na	na	na	na	na	na	4.3	4.2	3.0	2.8	2.0

NOTES
(1) Without inventory change
(2) Adjusted to inventory change
na Not received at publication time

SOURCE: Industrial Development and Renovation Organization of Iran

IRISH REPUBLIC

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports[1]	39.9	34.0	31.5	34.4	32.8	28.1	22.8	22.9	15.4	21.4	16.3
6. – Exports[1]	25.4	18.6	16.0	18.0	14.3	10.6	10.4	8.3	8.8	5.0	4.2
8. = Apparent aluminum consumption[2]	14.6	15.3	15.5	16.4	18.5	17.5	12.5	14.6	6.6	16.4	12.1
13. ÷ Mid-year population (mill.)	3.5	3.4	3.4	3.4	3.4	3.3	3.2	3.2	3.2	3.1	3.1
14. = Per capita consumption (lbs.)[2]	8.3	8.8	9.1	9.6	10.9	10.6	7.9	9.1	4.1	10.6	7.8

NOTES
(1) Includes ingot and mill products
(2) Without inventory change

SOURCE: Central Statistics Office, Dublin

ISRAEL

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	na	na	na	na	na	na	18.7	16.0	na	27.6	14.2
4. + Imports of mill products	na	na	na	na	na	na	12.1	15.1	na	3.6	3.0
5. + Recovery of secondary	na	na	na	na	na	na	1.1	1.1	na	0.3	0.4
6. – Exports of ingot	na	na	na	na	na	na	4.4	5.7	na	—	—
7. – Exports of mill products	na	na	na	na	na	na	10.5	8.8	na	2.8	2.1
8. = Apparent aluminum consumption	na	na	na	na	na	na	17.1	17.6	na	28.7	15.5
13. ÷ Mid-year population (mill.)	na	na	na	na	na	na	3.6	3.6	na	3.4	3.3
14. = Per capita consumption (lbs.)[1]	na	na	na	na	na	na	9.4	9.9	na	16.9	9.4

NOTES
(1) Without inventory change
na Not received at publication time

SOURCE: The Israel Aluminium Association

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

ITALY

Thousands of short tons

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. Primary aluminum production	215.7	256.7	301.8	298.9	296.6	298.5	286.7	227.6	209.6	233.8	203.1
3. + Imports of ingot	280.5	232.8	230.2	325.0	260.8	210.0	215.5	216.5	122.4	282.2	202.4
4. + Imports of mill products	121.6	91.8	89.9	123.0	99.4	66.9	65.0	54.4	39.1	75.6	50.5
5. + Recovery of secondary	367.1	312.0	316.4	328.5	284.4	262.3	261.2	227.0	175.3	225.9	210.6
6. – Exports of ingot	45.5	59.6	54.9	13.0	24.7	76.4	26.7	10.4	36.7	25.7	15.5
7. – Exports of mill products	123.7	111.2	103.4	95.2	121.1	116.5	95.7	91.7	64.7	66.0	60.3
8. = Apparent aluminum consumption	815.7	722.4	780.0	967.2	795.4	644.8	706.1	623.4	445.0	725.8	590.8
11. ± Inventory change	– 14.4	– 41.9	+ 5.3	+ 63.2	+ 11.4	– 41.9	+ 35.7	+ 10.6	+ 20.0	+ 78.2	+ 14.0
12. = Aluminum consumption	830.1	764.3	774.7	904.0	784.1	686.7	670.4	612.8	425.0	647.6	576.8
13. ÷ Mid-year population (mill.)	56.8	56.3	56.1	55.9	55.8	55.7	55.4	56.2	55.8	55.4	54.9
14. = Per capita consumption (lbs.)(1)	28.7	25.6	27.8	34.6	28.4	23.1	25.6	22.2	15.9	26.2	21.5
15. = Per capita consumption (lbs.)(2)	29.2	27.1	27.6	32.4	28.0	24.7	24.3	21.8	15.2	23.3	21.0

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
r — Revised

SOURCE: Associazione Nazionale Industrie Metalli Non Ferrosi

JAPAN

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	285.1	391.4	856.3	1,207.8	1,118.0	1,170.4	1,314.9	1,017.7	1,120.1	1,238.6	1,215.5
2. ± Stockpile adjustment	– 160.6	– 90.5	– 24.3	—	24.3	– 13.6	10.5	10.5	—	—	—
3. + Imports of ingot	1,767.8	1,594.6	1,244.8	1,003.2	825.0	815.9	588.4	474.1	417.1	527.7	524.3
4. + Imports of mill products	37.0	30.4	33.1	49.5	35.4	29.6	23.9	22.9	24.1	47.1	29.6
5. + Recovery of secondary	771.6	617.8	606.4	620.6	524.8	545.0	431.8	326.5	226.2	253.4	286.4
6. – Exports of ingot	1.9	7.4	13.4	8.4	8.8	60.2	109.8	76.8	92.1	38.4	3.2
7. – Exports of mill products	217.2	170.7	125.6	80.5	108.5	163.7	95.5	73.0	56.6	36.4	32.9
8. = Apparent aluminum consumption	2,481.9	2,365.6	2,577.3	2,792.1	2,410.3	2,323.4	2,164.4	1,702.0	1,638.8	1,992.0	2,019.7
9. + Beginning inventory	171.3	298.4	194.4	86.0	149.8	284.6	134.6	442.4	292.6	94.1	127.5
10. – Ending inventory	103.7	171.3	298.4	194.4	86.0	149.8	284.6	134.6	442.4	296.2	94.2
11. ± Inventory change	67.6	– 127.1	+ 104.1	+ 108.3	– 63.8	– 134.8	+ 150.0	– 307.8	+ 146.2	+ 202.1	– 33.3
12. = Aluminum consumption	2,549.4	2,492.7	2,473.2	2,683.8	2,474.1	2,458.2	2,014.4	2,009.8	1,492.6	1,789.9	2,053.0
13. ÷ Mid-year population (mill.)	119.5	118.8	117.9	117.1	116.1	114.9	113.9	112.4	111.0	110.1	108.9
14. = Per capita consumption (lbs.)(1)	41.5	39.9	43.7	47.7	41.5	40.4	38.0	30.3	29.5	36.2	37.1
15. = Per capita consumption (lbs)(2)	42.7	41.9	41.9	45.8	42.6	42.8	35.4	35.8	26.9	32.5	37.7

NOTES:
(1) Without inventory change
r — Revised

SOURCE: Japan Aluminium Federation

KOREA, REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	13.9	14.8	17.2	17.6	17.6	17.7	17.3	17.6	17.7	17.7	16.6
3. + Imports of ingot	147.7	105.0	98.6	63.6	80.6	85.6	62.4	32.4	16.5	17.5	4.4
4. + Imports of mill products	37.5	24.0	17.0	20.0	22.6	20.4	15.8	12.0	9.0	8.7	10.9
5. + Recovery of secondary	14.7	13.3	11.5	7.8	10.2	8.9	7.3	6.8	1.7	1.7	1.0
6. – Exports of ingot	—	—	—	1.5	0.6	1.0	—	—	—	—	—
7. – Exports of mill products	22.8	24.0	25.7	35.0	9.0	13.0	15.0	8.0	2.7	5.0	5.4
8. = Apparent consumption	190.9	133.1	118.6	72.5	121.4	118.6	87.8	60.8	42.2	40.6	27.5
13. ÷ Mid-year populatioin (mill.)	40.0	39.3	38.7	38.2	37.6	37.0	36.4	35.9	35.3	34.7	34.1
15. = Per capita consumption (lbs.)(1)	9.6	3.4	3.1	1.9	3.2	3.2	2.4	1.7	1.2	1.2	0.8

(1) Without inventory change

SOURCE: Ministry of Commerce and Industry, Rep. of Korea

Detail may not add to totals due to rounding.

MEXICO

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	43.8	45.4	47.6	47.0	47.6	47.5	47.1	46.7	44.0	45.4	43.2
3. + Imports of aluminum ingot	12.2	35.6	64.8	70.0	61.8	43.4	9.3	17.2	13.1	28.8	15.8
4. + Imports of mill products	14.2	68.6	91.4	54.5	40.1	32.2	18.0	33.9	36.6	24.8	35.0
5. + Recovery of secondary	16.7	28.4	22.4	18.9	16.4	13.5	8.2	10.8	10.3	10.9	10.3
6. − Exports of aluminum ingot	0.6	—	—	(a)	—	—	0.1	0.1	0.1	0.2	0.4
7. − Exports of mill products	1.8	1.4	3.5	3.7	3.4	4.1	2.7	1.7	1.2	3.0	1.8
8. = Apparent aluminum consumption	84.2	176.6	222.7	186.6	162.6	132.7	80.0	106.7	102.7	106.6	102.1
9. + Beginning inventory	14.8	5.0	2.2	1.7	2.0	2.8	4.8	2.2	1.3	1.6	3.8
10. − Ending inventory	8.3	14.8	5.0	2.2	1.7	2.0	2.8	4.8	2.2	1.3	1.6
11. = Inventory change	6.5	+9.8	+2.8	+0.5	−0.3	−0.8	−2.0	+2.6	+0.9	−0.3	−2.2
12. = Aluminum consumption	90.6	166.8	219.9	186.1	162.9	133.5	82.0	104.1	101.9	107.0	104.3
13. ÷ Mid-year population (mill.)	72.0	70.0	68.0	67.0	67.0	64.7	62.5	60.4	58.3	56.2	54.3
14. = Per capita consumption (lbs.)(1)	2.3	5.1	6.6	5.6	4.9	4.1	2.6	3.5	3.5	3.8	3.8
15. = Per capita consumption (lbs.)(2)	2.5	4.9	6.5	5.6	4.9	4.1	2.6	3.4	3.5	3.8	3.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(a) Less than 0.5 thousand short tons

SOURCE: Instituto del Aluminio, A.C.

NETHERLANDS

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	259.5	276.6r	288.9	284.6	281.7	285.8	261.1	274.4	284.0	272.8	200.0
3. + Imports of ingot	313.7	215.5	177.8	237.9	185.0	160.4	178.9	178.7	133.8	175.0	106.7
4. + Imports of mill products	126.8	116.2	101.9	124.9	117.4	91.5	101.1	104.8	64.3	80.8	82.8
5. + Recovery of secondary	64.2	54.9r	55.3	58.9	51.4	48.5	45.9	42.4	37.8	na	na
6. − Exports of aluminum ingot	477.6	386.7	388.0	402.7	396.2	324.5	348.5	320.0	291.2	324.1	213.5
7. − Exports of mill products	111.4	92.7	95.3	108.8	97.3	74.6	84.5	88.6	60.2	74.0	77.4
8. = Apparent consumption	175.0	183.8r	140.3	194.8	142.0	187.0	153.9	191.7	168.4	130.5	98.6
9. + Beginning inventory(3)	11.8	8.6	11.4	8.7	48.2	39.0	59.7	70.9	23.3	29.4	32.8
10. − Ending inventory(3)	12.7	10.6	9.6	11.4	8.5	66.1	38.9	62.2	65.7	43.5	31.5
11. = Inventory change	+0.9	+2.0	−1.8	+2.6	−39.8	+27.2	−20.8	−8.7	+42.4	+14.1	−1.3
12. = Aluminum consumption	174.2	181.8r	142.1	192.1	181.8	159.8	174.7	200.4	126.0	116.4	99.9
13. ÷ Mid-year populatioin (mill.)	14.4	14.3	14.2	14.1	14.0	13.9	13.9	13.8	13.7	13.6	13.5
14. = Per capita consumption (lbs.)(1)	24.3	25.7r	19.8	27.6	20.3	26.9	22.0	27.8	24.7	19.2	14.6
15. = Per capita consumption (lbs.)(2)	24.2	25.4	20.1	27.2	26.0	23.0	25.1	29.1	18.3	17.1	14.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(3) Primary Metal only

na Not available
r — Revised

SOURCE: Vereniging Netherlands Aluminium Institut

NEW ZEALAND

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	242.6	179.8	170.1	170.3	169.9	165.2	158.3	152.6	119.0	120.2	127.5
3. + Imports of ingot	7.3	8.0	3.7	—	—	—	—	—	1.4	1.3	2.9
4. + Imports of mill products	3.2	3.4	2.9	2.7	3.7	3.1	3.7	2.3	4.4	9.7	5.7
5. + Recovery of secondary(e)	3.3	3.0	3.3	2.2	2.2	2.0	2.0	1.7	1.3	2.3	2.1
6. − Exports of ingot	231.9	154.7	138.3	139.1	130.7	147.8	134.4	119.2	106.2	110.6	95.7
7. − Exports of mill products	6.0	8.5	6.3	5.9	3.0	2.1	1.3	0.5	0.2	0.1	0.2
8. = Apparent aluminum consumption	18.5	31.1	35.4	30.2	42.0	20.3	28.2	36.9	19.8	22.8	42.3
11. ± Inventory change	−10.8	+6.6	+3.3	+3.6	+12.2	−6.4	+0.6	+4.7	−3.5	−18.5	+8.2
12. = Aluminum consumption	29.3	24.5	32.1	26.6	29.8	26.7	27.6	32.2	23.4	41.3	34.2
13. ÷ Mid-year populatioin (mill.)	3.19	3.16	3.13	3.10	3.15	3.13	3.13	3.12	3.09	3.03	2.97
14. = Per capita consumption (lbs.)(1)	11.6	19.6	22.5	19.5	26.7	13.0	18.1	23.7	12.8	15.1	28.5
15. = Per capita consumption (lbs.)(2)	18.4	15.4	20.5	17.2	19.0	17.1	17.6	20.7	15.1	27.3	23.0

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
Detail may not add to totals due to rounding

SOURCE: Comalco Limited, and New Zealand Dept of Statistics

Per Capita Aluminum Consumption—Continued

Thousands of short tons

NICARAGUA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	na	na	na	na	na	0.6	1.3	0.6	0.5	0.4	0.4
4. + Imports of mill products	na	na	na	na	na	1.0	1.4	1.0	1.2	1.5	0.8
6. – Exports of aluminum ingot	na	na	na	na	na	0.9	1.1	0.3	0.1	*	*
8. = Apparent aluminum consumption	na	na	na	na	na	0.7	1.5	1.2	1.5	1.9	1.1
13. ÷ Mid-year population (mill.)	na	na	na	na	na	2.4	2.3	2.2	2.2	2.1	2.0
14. = Per capita consumption (lbs.)(1)	na	na	na	na	na	0.5	1.3	1.0	1.4	1.8	1.1

NOTES:
(1) Without inventory change

na Not received at publication time
** Less than .05 thousand short tons*

SOURCE: Ministerio de Economia Industria y Comercio, Managua

NORWAY

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	788.6	711.1	701.2	729.7	742.4	724.6	702.1	684.3	655.9	714.8	681.1
3. + Imports of ingot	12.3	23.1	16.3	18.1	9.8	8.8	9.4	35.0	21.3	30.7	35.7
4. + Imports of mill products	46.7	41.0	42.4	46.9	33.0	37.9	44.5	31.2	29.9	32.7	19.1
5. + Recovery of secondary	0.8	3.1	3.1	3.9	4.0	4.4	4.4	5.5	7.7	8.6	8.2
6. – Exports of ingot	702.6	601.2	577.6	574.5	623.1	694.6	612.1	619.1	497.8	611.1	634.9
7. – Exports of mill products	115.9	84.7	82.6	78.9	80.1	67.3	52.2	59.6	47.0	50.1	67.0
8. = Apparent aluminum consumption	30.0	92.3	102.9	145.1	85.9	13.4	96.2	77.3	170.0	125.6	42.2
11. ± Inventory change	–30.2	–31.3	+17.4	+42.7	–20.4	–78.7	–5.7	–34.2	+82.6	+22.3	–33.4
12. = Aluminum consumption	60.2	123.6	85.5	102.4	106.3	92.1	101.9	111.5	87.4	103.3	75.6
13. ÷ Mid-year population (mill.)	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0
14. = Per capita consumption (lbs.)(1)	14.6	45.0	50.2	70.8	43.0	6.8	48.1	38.7	85.0	62.8	21.1
15. = Per capita consumption (lbs.)(2)	29.4	49.8	41.7	50.0	53.1	46.1	50.9	55.8	43.6	51.6	37.8

NOTES:
(1) Without inventory change
(2) Adjustec for inventory change

SOURCE: Skan Aluminium

PANAMA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ignot	1.3	1.3	1.7	1.8	1.5	1.0	1.1	1.8	1.7	2.5	2.2
4. + Imports of mill products	1.8	0.1	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4
5. + Recovery of secondary	0.7	0.7	0.6	0.4	0.4	0.3	0.6	0.4	0.3	0.4	0.4
6. – Exports of Ignot	0.2	—	—	—	—	—	—	—	—	—	—
7. – Exports of mill products	0.3	0.3	0.2	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.3
8. = Apparent aluminum consumption	3.3	1.8	2.2	2.0	1.9	1.4	1.7	2.2	2.1	3.0	2.7
13. ÷ Mid-year population (mill.)	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.6	1.6	1.6
14. = Per capita consumption (lbs.)(1)	3.2	1.8	2.2	2.0	2.0	1.5	1.8	2.6	2.6	3.8	3.4

NOTES:
(1) Without inventory change

SOURCE: Aluminio de Panama, S.A.

Detail may not add to totals due to rounding.

REPUBLIC of the PHILIPPINES

		1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3	+ Imports of ingot	16.3	20.4	11.5	19.4	31.3	18.5	18.7	19.2	6.8	20.3	16.9
4	+ Imports of mill products	9.8	15.0	4.9	6.0	7.6	4.7	4.0	2.5	5.0	2.4	2.0
6	Exports of ingot	—	*	*	1.0	1.1	—	—	0.2	0.1	—	—
7	Exports of mill products	4.1	6.9r	5.2r	6.2r	3.2r	3.8r	0.9	0.3	1.9	4.6	3.1
8	= Apparent aluminum consumption	22.0	28.5r	11.1r	19.3r	35.8r	19.4r	21.8	21.2	9.8	18.1	15.8
13	Mid-year population (mill.)	52.1	50.7	49.5	48.3	47.1	45.9	44.7	43.5	42.2	41.3	40.1
14	Per capita consumption (lbs.)[1]	0.8	1.1r	0.4r	0.8r	1.5r	0.8r	1.0	1.0	0.5	0.9	0.8

NOTES

(1) Without inventory change

r — Revised

SOURCE: National Census and Statistics Office, Philippines

PORTUGAL

		1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3	+ Imports of ingot	47.3	54.6	46.8r	30.3r	24.0r	22.3r	9.3	6.3	2.9	2.9	1.8
4	+ Imports of mill products	16.5	16.0	17.0r	18.3r	16.4r	18.3r	29.1	22.0	13.4	35.0	23.9
5	+ Recovery of secondary	1.9	2.0	2.2	2.9	4.2	3.4	2.3	2.2	2.2	2.3	1.8
6	Exports of aluminum ingot	0.4	0.6	0.4r	0.3r	1.0r	0.2r	0.1	0.1	—	(a)	(a)
7	Exports of mill products	8.8	12.9	6.7r	9.5r	6.6r	1.7r	6.9	3.3	5.6	4.1	4.1
8	= Apparent aluminum consumption	56.4	59.1	58.9r	41.7r	37.0r	42.1r	33.7	27.1	12.9	36.1	23.4
13	Mid-year population (mill.)	9.9	9.9	9.9	9.9	9.8	9.8	9.7	9.7	9.4	9.1	9.0
14	Per capita consumption (lbs.)[1]	11.4	11.9	11.9r	8.5r	7.6r	8.6r	6.9	5.6	2.7	7.9	5.2

NOTES

(1) Without inventory change

(a) Less than .05 thousand short tons

na Not received at publication time

** Including the Azores and Madeira*

SOURCE: National Statistical Institute, Lisbon

EL SALVADOR

		1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3	+ Imports of ingot	1.2	1.0	1.4	1.8	2.6	2.7	2.2	1.9	1.4	1.2	1.1
4	+ Imports of mill products	2.1	—	0.9	0.4	1.3	2.2	0.7	1.9	0.7	1.8	2.3
5	+ Recovery of secondary	0.6	0.7r	0.7	0.8	1.0	1.1	1.9	0.8	0.6	0.5	0.4
7	Exports of mill products	1.1	0.4r	1.4	2.1	2.6	3.6	2.9	2.3	1.8	2.6	2.7
8	= Apparent consumption	2.8	1.2r	1.4	1.0	2.2	2.3	0.9	2.2	0.8	0.9	1.2
13	Mid-year population (mill.)	4.8	1.2r	4.6	4.5	4.4	4.4	4.3	4.1	4.0	3.9	3.9
14	Per capita consumption (lbs.)[1]	1.1	0.5r	0.6	0.4	1.0	1.0	0.4	1.1	0.4	0.5	0.6

NOTES

(1) Without inventory change

e — Estimated

r — Revised

SOURCE: Aluminio de Centro America, S.A.

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

Thousands of short tons

KINGDOM OF SAUDI ARABIA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	na	*	*	—	—	—	—	—	—	—	—
3. + Imports of ingot	na	5.7	88.5	80.9	58.7	51.2	40.6	12.3	6.4	6.0	na
4. + Imports of mill products	na	31.7	13.4	15.4	13.6	13.4	10.4	5.8	3.5	2.2	na
6. – Exports of ingot	na	—	4.2	1.9	0.6	0.4	0.5	*	0.1	*	—
7. – Exports of mill products	na	0.6	*	0.2	0.5	0.2	0.6	0.1	0.2	*	na
8. = Apparent consumption	na	36.8	97.7	94.2	71.3	63.9	49.9	18.0	9.5	8.1	na
13. ÷ Mid-year population (mill.)	na	7.8	7.8	7.6	7.5	7.3	7.1	6.9	6.7	6.5	na
14. = Per capita consumption (lbs.)[1]	na	9.4	25.1	24.8	19.0	17.5	14.1	5.2	2.8	2.5	na

NOTES:
(1) Without inventory change
** less than 50 tons*
na not available

SOURCE: Saudi Basic Industries Corp.

SINGAPORE, REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
3. + Imports of ingot	19.8	12.1	8.8	9.9	6.6	8.8	4.4	4.4	1.1	3.3	3.3
4. + Imports of mill products	38.6	30.9	29.8	23.1	25.4	17.6	15.4	12.1	8.8	14.3	14.3
6. – Exports of ingot	14.3	6.6	3.3	4.4	3.3	4.4	1.1	1.1	—	—	—
7. – Exports of mill products	15.4	7.7	4.4	4.4	4.4	4.4	1.1	1.1	1.1	1.1	1.1
8. = Apparent consumption	28.7	28.7	30.9	24.3	24.3	17.6	17.6	14.3	8.8	16.5	16.5
13. ÷ Mid-year population (mill.)	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2
14. = Per capita consumption (lbs.)[1]	22.9	23.0	25.3	20.1	20.4	15.0	15.1	12.5	7.8	14.8	15.0

NOTES:
(1) Without inventory change

SOURCE: Department of Statistics, Singapore

SOUTH AFRICA, REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	na	116.6	92.3	94.8	93.8	87.6	85.3	85.4	82.8	80.0	59.9
3. + Imports of ingot	na	0.8	2.0	0.3	0.7	0.7	0.4	0.7	1.4	0.9	1.0
4. + Imports of mill products	na	11.9	13.2	12.2	7.8	7.2	6.5	10.7	13.2	12.7	8.0
5. + Recovery of secondary	na	30.0	31.2	30.0	18.2	11.2	10.6	5.3	6.1	6.7	6.0
6. – Exports of ingot	na	27.1	3.2	14.2	36.5	42.4	32.1	17.0	21.1	16.1	5.7
7. – Exports of mill products	na	1.0	1.2	3.6	1.9	2.3	2.8	3.3	2.6	3.0	2.1
8. = Apparent aluminum consumption	na	131.2	132.4	119.5	82.1	62.0	68.0	81.8	79.8	81.2	67.0
11. ± Inventory change	na	+13.6	+4.1	+0.4	+0.9	–7.9	–1.1	+4.1	+0.7	+0.1	–1.8
12. = Aluminum consumption	na	117.6	128.3	119.0	81.2	69.9	69.1	77.7	79.1	81.1	68.8
13. ÷ Mid-year population (mill.)	na	26.2[3]	25.6[3]	24.1[3]	28.2	27.3	26.7	26.1	25.5	24.9	24.3
14. = Per capita consumption (lbs.)[1]	na	9.9	10.3	9.9	5.8	4.6	5.1	6.3	6.3	6.5	5.5
15. = Per capita consumption (lbs.)[2]	na	9.0	10.0	9.9	5.8	5.1	5.2	6.0	6.2	6.5	5.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(3) Estimate: Population excludes independent homelands—Republics of Transkei, Bophutatswanda and Venda.

SOURCE: Non-ferrous Metals Industries Association and Huletts Aluminum Ltd.

Detail may not add to totals due to rounding.

SPAIN

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	394.2	404.0[a]	437.2	426.0	286.5	233.9	233.5	231.8	233.1	210.5	176.4
3. + Imports of aluminum ingot	13.7	17.1[a]	15.0	3.5	7.9	41.8	40.6	15.9	31.5	30.2	28.1
4. + Imports of mill products	na	na	23.5	26.5	22.4	17.5	27.9	15.1	14.6	19.7	13.8
6. − Exports of aluminum ingot	182.9	191.4[a]	179.3	117.7	47.3	6.4	9.9	11.9	2.6	2.8	1.3
7. − Exports of mill products	na	na	43.0	50.0	53.1	30.9	33.1	31.7	31.5	24.3	22.4
8. = Apparent aluminum consumption	na	na	253.3	288.3	216.4	256.0	258.9	219.1	245.0	233.5	194.6
11. ± Inventory change	na	na	+36.9	+23.1	−20.5	+26.5	+3.0	22.0	+38.6	−7.7	−16.5
12. = Aluminum consumption	na	216.1[a]	213.1	265.1	236.6	299.5	256.0	241.2	206.5	241.2	211.1
13. ÷ Mid-year population (mill.)	na	38.5	37.7	37.4	37.1	36.8	36.4	36.0	35.6	35.2	34.8
14. = Per capita consumption (lbs.)[1]	na	na	13.4	15.4	11.7	13.9	14.2	12.2	13.8	13.3	11.2
15. = Per capita consumption (lbs.)[2]	na	11.2e	11.3	14.2	12.8	12.5	14.1	13.4	11.6	13.7	12.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
na Not received at publication time
(a) Source: World Bureau of Metal Statistics

SOURCE: Aluminio De Galicia, S.A.

SWEDEN

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	90.6	87.0	91.3	89.9	90.4	90.4	91.0	89.7	85.3	90.9	91.3
3. + Imports of ingot	54.8	50.2	42.7	40.7	40.5	37.7	47.8	51.5	37.1	49.6	39.1
4. + Imports of mill products	95.1	81.6	69.4	71.0	72.1	60.7	65.4	70.5	60.6	59.9	55.4
5. + Recovery of secondary	27.4	25.6	27.2	27.0	26.5	27.7	27.0	26.5	37.9	39.5	34.5
6. − Exports of aluminum ingot	43.2	38.8	41.7	19.5	21.6	42.4	35.8	14.7	6.3	10.8	18.2
7. − Exports of mill products	55.8	51.0	47.4	51.9	63.7	59.1	51.1	46.8	33.6	52.8	45.7
8. = Apparent aluminum consumption	169.0	154.4	141.5	157.2	144.1	115.0	144.3	176.7	181.1	176.3	156.4
11. ± Inventory change	2.2	−7.4	+0.3	+14.3	−8.9	−20.4	+1.3	+9.5	+17.7	+2.2	−7.6
12. = Aluminum consumption	171.2	161.8	141.2	142.9	153.0	135.4	143.0	167.2	163.4	174.1	164.0
13. ÷ Mid-year population (mill.)	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.1
14. = Per capita consumption (lbs.)[1]	40.6	37.0	34.1	37.9	34.7	27.7	34.8	43.1	44.2	43.0	38.6
15. Per capita consumption (lbs.)[2]	41.1	38.8	34.0	34.4	36.9	32.6	34.5	40.8	39.8	42.5	40.5

NOTES:
Revised to reflect inventory changes and other data revisions
(1) Without inventory change
(2) Adjusted for inventory change
na Not available at publication time

SOURCE: National Central Bureau of Statistics, Sweden, and Granges Aluminium

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

Thousands of short tons

SWITZERLAND

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	83.8	83.0	90.9	95.1	91.5	87.7	88.0	86.2	86.9	95.9	94.1
3. + Imports of ingot	63.1	52.2	39.8	58.2	43.7	37.4	43.2	34.3	17.7	45.8	32.3
4. + Imports of mill products	58.1	51.9	52.8	56.9	47.0	39.8	34.5	27.0	18.5	28.9	23.9
5. + Recovery of secondary	23.3	20.6	22.7	21.4	21.2	19.7	22.2	19.6	16.4	19.0	18.3
6. – Exports of ingot	29.4	28.0	25.0	25.1	29.1	19.4	18.1	21.0	12.9	12.6	26.4
7. – Exports of mill products	88.6	77.7	72.8	79.4	84.4	74.1	77.6	64.7	50.0	56.6	49.4
8. = Apparent aluminum consumption	110.1	102.1	108.1	127.1	89.9	91.1	92.2	81.4	76.6	120.4	92.8
11. ± Inventory change	+ 3.4	4.6	0.8	+ 6.5	7.4	1.1	+ 2.1	6.5	+ 5.5	+ 8.8	6.6
12. = Aluminum consumption	106.7	106.7	108.9	120.7	97.2	92.2	90.1	87.9	71.1	111.6	99.4
13. ÷ Mid-year population (mill.)	6.5	6.4	6.4	6.4	6.2	6.2	6.3	6.3	6.4	6.4	6.4
14. = Per capita consumption (lbs.)(1)	34.1	32.0	33.8	39.7	29.0	29.4	28.3	25.8	23.9	37.7	29.0
15. = Per capita consumption (lbs.)(2)	33.0	33.3	34.0	37.7	31.4	29.8	28.6	27.9	22.2	34.9	31.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Swiss Aluminium Ltd. and European Primary Aluminum Assn.

TAIWAN, REPUBLIC OF CHINA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	—	11.0	33.1	68.9	61.9	55.6	32.8	28.1	30.9	34.5	38.7
3. + Imports of ingot	153.3	97.7	52.6	64.3	58.3	52.5	57.9	40.1	12.7	20.2	16.2
4. + Imports of mill products	25.6	16.5	10.7	10.6	12.5	8.0	6.4	6.8	2.2	5.6	2.9
5. + Recovery of secondary(1)	26.7	17.1	18.5	21.2	15.2	10.5	9.6	6.8	6.5	9.0	14.6
6. – Exports of ingot	2.9	0.7	—	*	*	0.4	0.1	0.3	1.6	5.0	0.1
7. – Exports of mill products	20.3	15.4	21.2	19.0	16.6	8.2	4.0	4.0	4.1	3.2	6.9
8. = Apparent aluminum consumption	182.4	126.2	93.7	145.9	131.3	117.9	102.6	77.5	46.6	61.1	65.4
11. ± Inventory change	na	+ 1.0	37.0	+ 26.3	+ 0.1	+ 8.6	+ 15.3	+ 6.6	8.4	+ 9.1	+ 5.2
12. = Aluminum consumption	182.4	125.2	130.7	119.6	131.2	109.3	87.3	70.9	55.0	52.0	60.2
13. ÷ Mid-year population (mill.)	18.6	18.3	18.0	17.8	17.5	17.0	16.7	16.3	16.0	15.7	15.4
14. = Per capita consumption (lbs.)(2)	19.6	13.9	10.4	16.4	15.0	13.9	12.3	9.5	5.8	7.8	8.5
15. = Per capita consumption (lbs.)(3)	19.6	13.7	14.5	13.4	15.0	12.8	10.5	8.7	6.9	6.6	7.8

NOTES:
(1) Recovery of imported scrap only
(2) Without inventory change
(3) Adjusted for inventory change
** Less than 50 tons.*

SOURCE: Taiwan Aluminium Corporation

TURKEY, REPUBLIC OF

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	33.4	35.8(a)	44.5	37.0	37.6	44.9	51.6	45.2	18.0	—	—
3. + Imports of ingot	66.0	38.6	37.7	12.3	14.3	12.3	45.1	29.7	57.0	55.4	44.5
4. + Imports of mill products	6.4	9.5	5.4	4.0	8.0	1.9	3.3	4.3	3.2	2.8	7.4
6. – Exports of aluminum ingot	1.3	—	—	—	—	—	—	—	—	—	—
7. – Exports of mill products	23.6	17.0	10.4	6.5	6.4	6.8	10.8	9.7	3.5	24.4	4.6
8. = Apparent aluminum consumption	80.9	66.9	67.0	46.8	53.6	52.2	89.2	69.4	74.7	33.8	47.3
13. ÷ Mid-year population (mill.)	47.2	47.5	46.0	44.4	43.5	42.6	41.8	40.9	40.0	39.0	38.1
14. = Per capita consumption (lbs.)(2)	3.4	2.8	2.2	2.1	2.5	2.5	4.3	3.4	3.7	1.7	2.5

NOTES:
(2) Without inventory change
na Not available at publication time
** Less than 50 tons.*
e — estimated
(a) Source: World Bureau of Metal Statistics

SOURCE: State Institute of Statistics, Ankara, Turkey

Detail may not add to totals due to rounding.

UNITED KINGDOM

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	278.3	265.4	373.9	412.8	396.2	381.6	384.6	368.6	339.8	323.1	277.3
3. + Imports of ingot	179.0	170.6r	135.9	186.7	200.7	204.1	217.6	240.2	176.6	309.4	316.5
4. + Imports of mill products	247.1	221.1	173.5	159.8	197.8	174.0	143.6	123.6	82.7	114.3	101.5
5. + Recovery of secondary	135.1	119.5	155.1	165.3	176.3	192.0	200.9	207.0	184.2	208.2	208.7
6. − Exports of ingot	139.4	129.5r	185.7	208.2	220.5	171.4	157.3	174.4	96.7	96.4	89.1
7. − Exports of mill products	100.2	102.5	85.5	112.0	78.5	66.0	70.8	65.7	59.5	76.1	62.6
8. = Apparent aluminum consumption	600.0	544.7r	567.1	604.3	672.1	714.3	718.7	699.5	627.1	782.5	752.3
11. ± Inventory change	− 13.6	− 23.5r	− 13.6	+ 1.5	+ 55.0	− 29.1	− 20.2	− 1.4	+ 17.7	+ 12.6	− 16.6
12. = Aluminum consumption	613.5	568.1r	580.7	602.7	617.1	743.4	738.9	701.0	609.4	769.9	768.9
13. ÷ Mid-year population (mill.)	56.0	56.0	56.0	55.9	55.9	55.8	55.9	55.9	56.1	56.2	55.9
14. = Per capita consumption (lbs.)(1)	21.4	19.5r	20.3	21.6	24.0	25.6	25.7	25.0	22.4	27.8	26.9
15. = Per capita consumption (lbs.)(2)	21.9	20.3r	20.7	21.6	22.1	26.6	26.4	25.1	21.7	27.4	27.5

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Aluminium Federation Ltd.

UNITED STATES of AMERICA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary aluminum production	3,696.3	3,608.6	4,947.9	5,129.7	5,023.1	4,803.8	4,538.7	4,251.4	3,879.1	4,903.5	4,529.1
2. + Govt. stockpile adjustment	—	—	—	—	—	—	—	9.2	2.5	510.5	730.2
3. + Imports of ingot	818.7	679.4	710.7	580.7	570.8	757.8	670.3	575.4	434.1	508.9	508.0
4. + Imports of mill products	309.2	227.8	152.0	84.0	213.2	242.2	82.4	94.5	65.1	54.9	69.1
5. + Recovery of secondary	1,908.0	1,836.0r	1,973.0	1,738.0	1,777.0	1,673.0	1,605.0	1,471.0	1,236.0	1,282.0	1,230.0
6. − Exports of ingot	397.6	401.1	344.2	714.9	200.7	126.6	97.8	152.4	185.9	207.8	229.6
7. − Exports of mill products	222.8	246.2	340.8	381.7	310.8	247.1	258.3	257.9	216.6	255.7	233.0
8. = Apparent aluminum consumption	6,111.8	5,704.5r	7,098.6	6,435.8	7,072.6	7,103.1	6,540.3	5,991.2	5,214.3	6,796.3	6,603.8
9. + Beginning inventory	3,099.7	3,303.3	2,538.0	2,562.6	2,747.0	2,853.2	2,850.4	2,999.4	2,578.0	2,183.0	2,430.6
10. − Ending inventory	2,504.6	3,099.7	3,303.3	2,538.0	2,562.6	2,747.0	2,853.2	2,850.4	2,999.4	2,578.0	2,183.0
11. = Inventory change	595.1	− 203.6	+ 765.3	− 24.6	− 184.4	− 106.2	+ 2.8	− 149.0	+ 421.4	+ 395.0	− 247.6
12. = Aluminum consumption	6,706.9	5,908.1r	6,333.3	6,460.4	7,257.0	7,209.3	6,537.5	6,140.2	4,792.9	6,401.3	6,851.4
13. ÷ Mid-year population (mill.)	234.0	231.5	229.3	227.7	220.6	218.7	216.8	215.1	213.6	211.9	210.4
14. = Per capita consumption (lbs.)(1)	52.2	49.3r	61.9	56.5	64.1	65.0	60.3	55.7	48.8	64.1	62.8
15. = Per capita consumption (lbs.)(2)	57.3	51.0r	55.2	56.8	65.8	65.9	60.3	57.1	44.9	60.4	65.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
** Removal of less than 50 short tons*

r — Revised

SOURCE: the Aluminum Association, Inc.

VENEZUELA

	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
1. + Primary production	369.6	301.6	345.6	354.2	231.8	74.0	47.8	51.2	49.5	43.2	27.7
3. + Imports of ingot	1.1	1.0	0.4	0.2	10.6	—	8.7	2.2	0.2	—	1.8
4. + Imports of mill products	1.4	28.3	26.2	27.3	16.9	29.9	17.0	10.5	5.2	2.1	4.3
5. + Recovery of secondary	18.7	11.0	11.0	11.0	11.2	11.0	1.4	2.0	0.7	1.4	—
6. − Exports of ingot	321.9	229.8	263.4	239.5	136.0	31.0	11.5	19.4	—	15.8	8.9
7. − Exports of mill products	2.8	0.2	26.9	40.9	25.4	—	—	—	—	0.1	0.6
8. = Apparent aluminum consumption	66.2	111.9	92.9	112.3	109.1	83.9	63.5	46.5	44.8	30.8	24.8
9. + Beginning inventory.	69.2	53.8	28.0	22.3	11.1	1.2	4.1	9.4	1.6	1.7	5.0
10. − Ending inventory	19.8	61.6	53.8	28.0	22.3	11.2	6.1	3.5	8.1	1.6	2.8
11. ± Inventory change	− 49.4	+ 7.8	+ 25.8	+ 5.7	+ 9.0	+ 10.0	+ 2.0	− 5.9	+ 6.5	− 0.1	− 2.1
12. = Aluminum consumption	115.6	104.2	67.1	106.6	100.1	74.0	61.5	52.4	38.3	30.9	26.9
13. ÷ Mid-year population (mill.)	17.0	14.9	14.6	13.9	13.5	13.1	12.7	12.9	12.5	12.0	11.3
14. = Per capita consumption (lbs.)(1)	7.8	15.0	12.6	16.1	16.1	12.8	10.0	7.2	7.2	5.1	4.4
15. = Per capita consumption (lbs.)(2)	13.6	13.9	9.0	15.2	14.8	11.3	9.7	8.1	6.1	5.2	4.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(=) Less than .05 thousand short tons

SOURCE: Aluminio del Caroni, S.A., Venezuela

Details may not add to totals due to rounding.

ACSR AND ALUMINUM CABLE, BARE—Aluminum stranded conductor reinforced by a core of steel (ACSR), or aluminum (ACAR); or any other bare stranded aluminum conductor.

ATOMIZED POWDER—Powder produced by blowing or asperating molten metal through an orifice.

CASTING—A product made by pouring molten metal into a mold of a desired shape and letting it harden.

CONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.375" or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into electrical conductor wire.

DIRECT MILL USES—Finished product applications supplied for the most part directly from mills rather than from distributors or jobber warehouses.

DRAWING STOCK (Redraw Rod)—See Conductor or Non Conductor Redraw Rod.

DRAWN TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, and brought to final dimensions by drawing.

DROSS AND SKIMMINGS—The mixture of oxides and other impurities which float to the surface of molten aluminum and is skimmed off.

EXTRUDED PIPE AND TUBE—A hollow product formed by extruding that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape.

EXTRUDED ROD AND BAR—A solid product produced by extruding (sometimes brought to final dimensions by drawing) that is long in relation to cross section, which is round, square, rectangular, hexagonal, or octagonal in shape and 0.375" or greater in diameter or in at least one perpendicular distance between parallel faces.

EXTRUDED SHAPES—A product produced by extruding, that is long in relation to its cross-sectional dimensions and has a cross section other than that of rod and bar and pipe and tube.

EXTRUSION INGOT (BILLET)—A solid or hollow cast form, usually cylindrical, suitable for extruding.

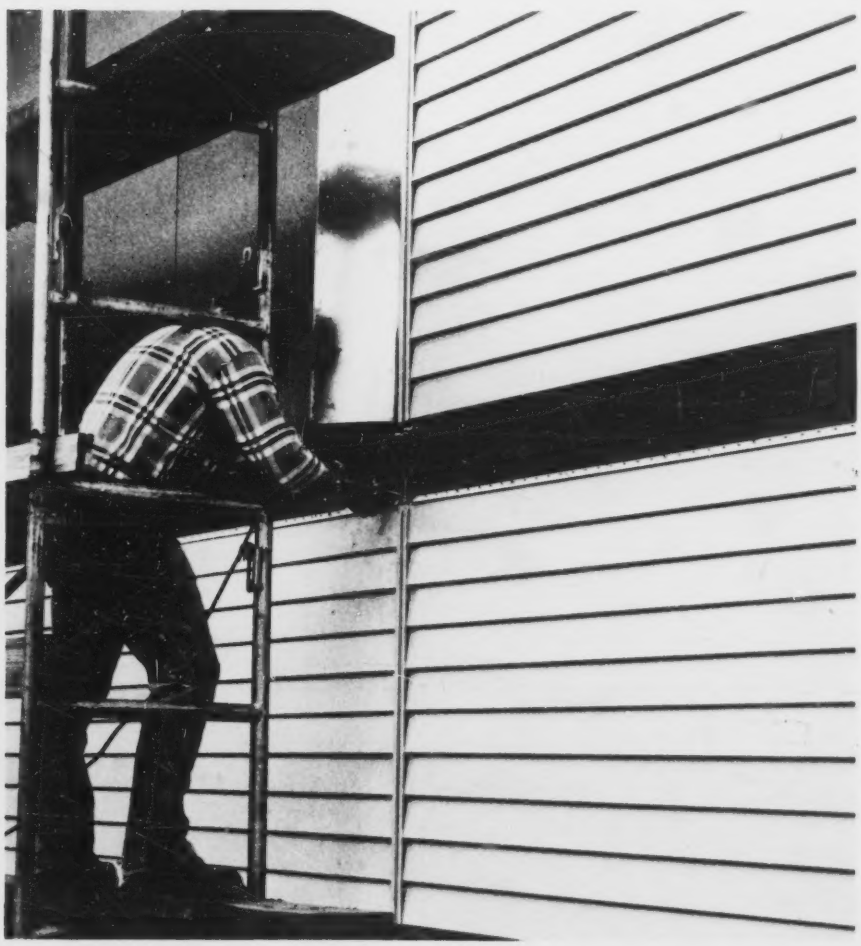
FLAKED POWDER—Powder consisting of flat or scale-like particles of a thickness small compared with other dimensions, produced by milling in the presence of a lubricant.

FOIL—A flat rolled product, rectangular in cross section, of thickness less than 0.006".

FORGINGS (EXCLUDING IMPACT EXTRUSIONS)—A product worked to a predetermined shape by one or more processes such as hammering, upsetting, pressing, rolling, etc.

GENERAL LINE DISTRIBUTOR—Warehouses and sells a number of mill products to a wide variety of customers.

IMPACTS (EXCLUDING COLLAPSIBLE TUBES AND CANS)—A product formed in a confining die from a metal slug, usually cold, by rapid simple stroke application of force through a punch, causing the metal to flow around the punch and/or through an opening in the punch or die.



After the 30-plus years on the market, aluminum siding has established itself as a home building material of quality and durability.

INTEGRATED PRODUCER (OR SUPPLIER)—For statistical reporting, a company which produces primary aluminum ingot in the United States and produces mill products from it.

METALLURGICAL/DESTRUCTIVE USES—Applications wherein, because of the way it is used, aluminum either loses its identity or is lost and cannot be recovered. Major uses include the deoxidizing of steel and reduction of ferroalloys; steel and other nonferrous metal alloys; steel coating; and such other applications as chemicals and catalysts.

MILL PRODUCTS—Metal that has been fashioned into an intermediate or semifabricated form in preparation for making a finished product. Example: sheet, a mill product, is used to make residential siding, a finished product.

NET SHIPMENTS—Excludes intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

NONCONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.376″ or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into nonconductor wire.

NONINTEGRATED FABRICATOR (OR SUPPLIER)—For statistical reporting, a U.S. mill product fabricator which is not affiliated with a domestic primary ingot producer.

OTHER INGOT AND MOLTEN METAL, PRIMARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), shipped by an integrated producer or nonintegrated fabricator from a company-owned facility not exclusively devoted to producing secondary ingot.

OTHER INGOT AND MOLTEN METAL, SECONDARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), principally produced from aluminum scrap to specification by secondary smelters (or others at a facility exclusively devoted to producing ingot from scrap for sale); excludes remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

OTHER ROD AND BAR (CONTINUOUS-CAST OR ROLLED)—A solid, round, square, rectangular, hexagonal, or octagonal in shape produced by continuous casting or rolling, that is long in relation to cross section, 0.375″ or greater in diameter or in at least one perpendicular distance between parallel faces; other than redraw rod and D.C. cast ingot.

PASTE—A blend of powder or flake with a thinner or plasticizer.

PLATE, NONHEAT-TREATABLE—A flat rolled product, rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened only by cold work.

PLATE, HEAT-TREATABLE—A flat rolled product, in 2000, 6000, or 7000 alloy series (except 7072), rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened by a suitable thermal treatment.

POWDER—An aggregate of discrete particles of aluminum, substantially all of which are finer than 1,000 microns (minus 18 mesh).

RECEIPTS—The metal physically received by a company for further processing.

REIMPORTS—Mill products that have been exported, partially processed outside the United States, and imported back to the United States while still in a mill product stage.

ROLLED STRUCTURAL SHAPES—A structural shape produced by hot rolling.

SECONDARY SMELTER—A company whose facilities are exclusively devoted to producing ingot or molten aluminum from scrap.

SEMIFABRICATED PRODUCTS—See Mill Products.

SHEET, NONHEAT-TREATABLE—A rolled product, flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened only by cold work.

SHEET, HEAT-TREATABLE—A rolled product, in 2000, 6000, or 7000 alloy series (except 7072), flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened by a suitable thermal treatment.

STATISTICAL ADJDUSTMENT—An adjustment made to product shipment data to account for net shipments of aluminum reported by the Bureau of the Census which are believed to be either over- or understated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustment reconciles the amounts reported by the Bureau of the Census with the net shipments that the Aluminum Association feels are more correct.

WELDED TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, produced by forming and seam-welding sheet longitudinally.

WIRE, BARE, CONDUCTOR AND NONCONDUCTOR—A solid wrought product that is long in relation to its cross section, which is square, round, rectangular, hexagonal, or octagonal in shape, whose diameter or greatest perpendicular distance between parallel faces (except for flattened wire) is less than 0.375″.

WIRE AND CABLE, INSULATED OR COVERED—Aluminum electrical conductor wire or stranded conductors that are insulated or covered.

Publications

The following publications are available from the Aluminum Association, Inc.

- Aluminum Situation (monthly)
- U.S. Exports and Imports of Aluminum (quarterly)
- Aluminum Extrusion Press Directory
- Aluminum Statistical Review Historical Supplement
- U.S. Aluminum Industry Plant Directory (1982)
- Publications Guide of the Aluminum Association
- Film Guide of the Aluminum Association
- About the Aluminum Association (a brochure)

Write to the Publications Department, the Aluminum Association, Inc., 818 Connecticut Avenue, N.W., Washington, D.C. 20006.

Small and mid-sized buses like this 22-passenger van-style cutaway bus, rely on aluminum in manufacturing to stay within federal gross vehicle weight ratings without compromising design.